

# KELTECH<sup>®</sup>

## ELECTRIC TANKLESS WATER HEATERS

Fluid heating for commercial, industrial and safety applications



PRECISE. RELIABLE. DURABLE. TANKLESS.

BRADLEYCORP.COM





## DESIGN. ENGINEERING. VALUE.

Bradley's Keltech electric tankless water heaters are the recognized leader in commercial-grade electric tankless water heating systems. Whether your application is commercial or industrial, there is a Keltech tankless water heating solution that you can rely on. With unmatched quality and durability, Keltech electric tankless water heaters are the fastest, most reliable, and most efficient tankless water heaters in the industry.

Keltech tankless heaters are offered in a full line of products for an extensive range of applications as well as custom designs for unique environments. Keltech tankless water heaters have been on the market for over 30 years and are now an integral part of Bradley's tempered water solutions. For 95 years, Bradley Corporation has manufactured commercial safety, water tempering, and washroom products. Today, Bradley is the industry's most comprehensive source for industrial-grade plumbing fixtures, tankless water heaters, washroom accessories, partitions, emergency fixtures, and plastic lockers.

- **Save Energy** Inefficient boiler systems have to generate heat and maintain temperature 24 hours per day, 7 days per week. Keltech tankless heaters only heat water when needed. And, Keltech's innovative controller is fully modulating so you only use the actual kW needed, not full power or stages.
- **Save Space** A large commercial tank water heater requires a large space. Keltech tankless water heaters only require 3 square feet (.3 square meters ) of space to generate 491,000 BTUs.
- **Simple Installation** Requires only one electrical connection and water. No pumps, no external fusing, and no design needs to be considered externally – it's all built into the heater.
- **Simple to Maintain** No tank to maintain, no anodes, no softeners.
- **Simply the Best** Built to the toughest standards with the highest quality materials and engineered to meet the world's most demanding applications.



Bradley is proud to be an American manufacturer for more than 95 years.



## CONTENTS

- 2 Installations
- 3 Cost/Benefit
- 4 The Keltech Advantage
- 4 Certifications
- 6 Selection and Sizing Guidelines
- 7 Keltech kW Recommendations
- 8 Commercial Water Heaters  
HL Series
- 10 Light Industrial Water Heaters  
C1N/C2N Series
- 12 Large Industrial Water Heaters  
CNA Series
- 14 Emergency Eyewash Heaters  
CLE Series
- 16 Safety Shower Heaters  
SNA Series
- 18 **NEW** Design On Demand: Skid Systems
- 19 **NEW** Design On Demand: S19361 & S19361F
- 20 Design On Demand: Custom Solutions

BIM-REVIT models available  
for all Keltech series at  
**[bradleycorp.com](http://bradleycorp.com)**

# GLOBAL CLIENTS

3M Company

Alaska Pacific Water Group

American Electric Power

Archer Daniels Midland

BC Place Stadium - 2010 Olympics

Bechtel

Becton Dickenson

Black & Veatch

Boeing

Bombardier

CB&I (Shaw Group)

CH2M Hill

Chevron

Con Edison

Conoco Philips

Day & Zimmerman

Dow Corning

Duke Energy

Entergy

Exxon Mobil

FLSmidth

GE Power

Georgia Pacific

Hemlock Semiconductor

Honeywell

Jacobs

Kimberly Clark

Kinder Morgan

PPG Industries

Panda Energy

Shell Energy

Siemens/US Filter

SNC-Lavalin

Southern Company

Steris Corp

United Airlines

United States Coast Guard

United States Navy

US Gypsum

Westinghouse

Xerox

## CASE STUDY

Jason Desler is an Environmental Health and Safety Engineer with extensive industry experience in the metal manufacturing process and the potential hazards it presents to employees. While working for one of the world's largest manufacturers of specialty metals and chemicals, he led a project to install safety shower and eyewash solutions for multiple metal manufacturing facilities in hazardous and industrial environments. Caustic chemicals, extreme furnace heat, and highly corrosive gases are a necessary part of the metal manufacturing process and pose a serious challenge.

Keltech's engineers carefully evaluated the project requirements and challenges with the client. Throughout this collaborative process, shower and eyewash fixture specifications were paired with a variety of Keltech CLE (emergency eyewash) and SN (safety shower) heaters to meet location and environmental conditions within and outside the manufacturing facilities.

The solution an integrated system installed with NEMA 4 enclosures, providing employees access to a compliant and safe station every 45-55 feet (14-17 meters) throughout the 13 facilities and surrounding environment. Keltech's CLE and SN Series solutions helped the organization realize tremendous operational savings while providing safety for employees.

Based on an electricity cost of ten cents per kilowatt-hour and a weekly compliance test of 69 safety systems (showers, eyewashes, and facewashes), an alternative closed-loop hot water supply system with mixing valves could cost over \$352,000 (USD) annually to operate. Due to its on-demand energy consumption, Keltech's tankless water heating solution would cost only \$2,300 annually.

**99.3% COST SAVINGS**



# THE KELTECH ADVANTAGE

- 1 PID Temperature Controller** More energy efficient and reliable than traditional microprocessors, Keltech heaters hold temperature as demand changes regardless of incoming ground water temperature.
- 2 Incoloy 800 Elements** Recognized for protection, durability and resistance to scaling from hard water.
- 3 Low Watt Density Element** Extremely low wattage is applied per square inch of the element for improved heat transfer and reduced scaling which results in a longer lasting element.
- 4 Electrical Design** Requires only one service feed per unit. Includes internal fusing as standard.
- 5 Solid State Relays** Silent switching with fast response works in conjunction with the PID to infinitely modulate and add to the life of the heater.
- 6 Auto Reset High Limit** Prevents overshoot or scalding on industrial and safety heater models. When temperature limit is reached, the unit will power down a bank of elements; when the temperature drops back down, power is restored.
- 7 Bi-metal Manual Reset** Prevents overshoot or scalding on all Keltech heaters. When temperature limit is reached, the fuse trips and must be manually reset before power can be restored to the elements.
- 8 TepidGuard™ Overshoot** Standard on SNA safety heaters, patented TepidGuard anti-scald protection will automatically open Purge Protection and purge excess temperature water.
- 9 Simple Touch Operation** Digital screen with touch pad for easy operation shows set point and output temperature.
  - **Low Flow Activation** Flow activations available down to .15 GPM (.57 L-Min).
  - **Minimal Pressure Drop** Large internal passageways ensure best-in-industry low pressure drops and make booster pumps unnecessary.
  - **Durable Plumbing Assembly** All units consist of brazed joints, a brass and copper heat exchanger, industrial grade flow switches and brass directional changes. All units are pressure tested to meet ASME minimum standards.
  - **Independent Safeties** All safeties are independent and redundant of each other. Three-tier anti-scald protection ensures user safety.
  - **Recirculation capable** The most accurate and long lasting tankless heating available for recirculation systems.

## CERTIFICATIONS

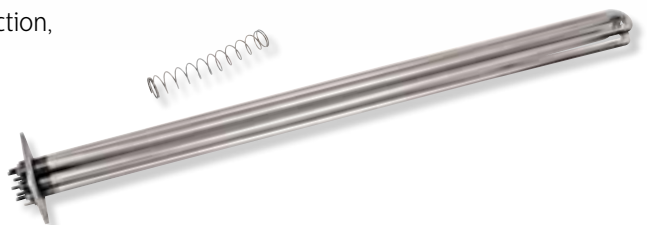
- **Lead-Free** Brass/Copper heat exchangers certified to NSF/ANSI 372.
- **Third-Party Certified** ETL listed to UL499, C-ETL listed to CSA-C22.2 No.88.
- **ASME Certified** Keltech CNA & SNA units (63 kW and over) are the only electric tankless water heaters National Board certified with the HLW stamp.
- **Electrical Compliance** Compliant to NEC/NFPA 70 and Canadian Electrical Code C22.1





## WHICH WOULD YOU TRUST?

Keltech tankless heaters' brass/copper heat exchangers are high quality and have a large capacity to heat water on demand. Inside each exchanger is a heavy duty, low watt density Incoloy 800 element. Other products in this class have elements that resemble coiled paper clip wire. Keltech's Incoloy 800 elements are recognized for their protection, durability, and resistance to scaling in hard water. Which would you trust to meet the demands of your application?



# SELECTION AND SIZING GUIDELINES

KELTECH SERIES:		COMMERCIAL	LIGHT INDUSTRIAL	LARGE INDUSTRIAL	EMERGENCY EYEWASH	SAFETY SHOWER
		HL	C1N & C2N	CNA	CLE	SNA
KW RANGE:		5 - 25 kW	18 - 50 kW	36 - 144 kW	18 - 25 kW	36 - 144 kW
STANDARD FLOW RANGE:		0.5 - 7 GPM (1.9 - 26.5 L-Min)	0.75 - 15 GPM (2.8 - 37.8 L-Min)	1.5 - 50 GPM (5.7 - 189 L-Min)	0.75 - 10 GPM (3 - 37.8 L-Min)	1.5 - 50 GPM (5.7 - 189 L-Min)
STANDARD VOLTAGES:		Single Phase: 208V, 240V, 277V, 480V 3-Phase Delta: 208V, 240V, 480V	3-Phase Delta: 480V, 600V	3-Phase Delta: 480V, 600V	3-Phase Delta: 480V, 600V	3-Phase Delta: 480V, 600V
FEATURES	Standard Temperature Range 40 - 160°F (4 - 71°C)	●	●	●	●	●
	Incoloy 800 elements	●	●	●	●	●
	Low watt density element	●	●	●	●	●
	PID temperature controller	●	●	●	●	●
	Solid state relays		●	●	●	●
	Minimal pressure drop	●	●	●	●	●
	Auto reset high limit switch		●	●	●	●
	Bi-metal manual reset	●	●	●	●	●
	Overshoot bypass protection					●
	Low flow activation	○	○			
	LED touch pad operation	●	●	●	●	●
	Standard NEMA enclosure	NEMA 1 5 - 18 kW NEMA 4 25 kW	NEMA 4	NEMA 4	NEMA 4	NEMA 4
	NEMA 4X	○	○	○	○	○
	Wall-mounted	●	●		●	
	Floor-mounted		○	●	○	●
	Building Management System Ingegration	○	○	○		
	Remote Emergency Stop			○		○
	High temp package 161° - 190°F (72° - 88°C)	○	○	○		
	Freeze protection -20°F (-31°C)			○	○	○
	Freeze protection -30°F (-34°C)			○		○
De-ionized (ultra-pure) water heating	○	○	○			
Explosion proof purge system (C1, D2)	○	○	○	○	○	
Integral ground fault		○	○	○	○	
Alarm with DCS				○	○	
Alarm with DCS & stack lights				○	○	
Internal fuse disconnect		○	○	○	○	
CERTIFICATIONS	NSF Lead-free	●	●	●	●	●
	ETL listed to UL499	●	●	●	●	●
	C-ETL listed to UL50E		●	●	●	●
	CSA-C22.2 No.88	○	●	●	●	●
	NFPA 496		○	○	○	○
	ASME certified (63 kW & over)			○		○

● Standard Feature ○ Optional Feature



- 1 Calculate Delta T ( $\Delta T$  Rise in Temperature):**  
Desired Set Point - Coldest Groundwater Temperature =  $\Delta T$
- 2 Maximum flow for application**
- 3 Select the kW required for application by using the table below or calculate:**  
Peak Demand (GPM) x  $\Delta T$  x .1465 = kW
- 4 Determine the voltage and phase available on site**
- 5 Select Tankless series with the kW rating that meets the flow rate and  $\Delta T$  for your application.**

$\Delta T =$	
GPM (L-Min) =	
kW =	
Voltage & Phase =	
Heater Selected =	

VISIT [BRADLEYCORP.COM](http://BRADLEYCORP.COM) TO USE OUR PRODUCT SIZING CALCULATOR

## Keltech kW Recommendation

TEMPERATURE  $\Delta^{\circ}F$  ( $^{\circ}C$ )

FLOW	GPM	L-MIN	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°	140°
			(6°)	(8°)	(11°)	(14°)	(17°)	(19°)	(22°)	(25°)	(28°)	(31°)	(33°)	(36°)	(39°)	(42°)	(44°)	(47°)	(50°)	(53°)	(56°)	(58°)	(61°)	(64°)	(67°)	(69°)	(72°)	(75°)	(78°)
0.15	0.6		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
0.50	1.9		5	5	5	5	5	5	5	5	5	5	5	5	6	10	6	10	10	10	10	10	10	10	10	10	10	10	10
0.75	2.8		5	5	5	5	5	5	5	5	6	10	10	10	10	10	10	10	10	10	12	12	12	15	15	15	15	15	18
1	3.8		5	5	5	5	5	6	6	10	10	10	10	10	12	12	12	15	15	15	15	18	18	18	18	25	25	25	25
1.5	5.7		5	5	5	6	10	10	10	10	10	12	15	15	18	18	18	25	25	25	25	25	36	36	36	36	36	36	36
2	7.6		5	5	6	10	10	12	12	15	15	18	18	25	25	25	25	25	36	36	36	36	36	36	36	36	50	50	50
3	11.3		5	10	10	12	15	18	18	25	25	25	36	36	36	36	36	50	50	50	50	50	50	50	54	54	63	63	63
4	15.1		6	10	12	15	18	25	25	36	36	36	36	50	50	50	50	50	54	63	63	63	72	72	72	108	108	108	108
5	18.9		10	12	15	25	25	36	36	36	36	50	50	50	50	54	63	63	63	72	72	108	108	108	108	108	108	108	108
6	22.7		10	15	18	25	36	36	36	50	50	50	54	63	63	72	72	108	108	108	108	108	108	108	108	110	126	126	126
7	26.5		10	18	25	36	36	36	50	50	54	63	63	72	72	108	108	108	108	108	108	108	126	126	126	128	144	144	144
8	30.2		12	18	25	36	36	50	50	54	63	72	72	108	108	108	108	108	126	126	126	144	144	144	-	-	-	-	
9	34.0		18	25	36	36	50	50	54	63	72	108	108	108	108	108	108	126	126	126	144	144	-	-	-	-	-	-	
10	37.8		18	25	36	50	50	54	63	72	108	108	108	108	108	108	126	126	126	144	144	-	-	-	-	-	-	-	
12	45.4		18	36	36	50	54	63	72	108	108	108	108	126	126	144	144	-	-	-	-	-	-	-	-	-	-	-	
15	56.7		25	36	50	63	72	108	108	108	126	126	144	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	75.6		36	50	63	108	108	108	126	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	94.5		54	63	108	108	126	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	113.4		54	72	108	126	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	132.3		54	108	108	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	151.2		63	108	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	170.1		72	108	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50	189.0		108	126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

	<b>HL Series</b>	5 - 25 kW
	<b>C1N or CLE Series</b>	18 - 25 kW
	<b>C2N Series</b>	36 - 50 kW
	<b>CNA or SNA Series</b>	36 - 144 kW

Note: To select the appropriate Series for dual-colored options, defer to your power and pressure drop requirements.

### Example 1: Commercial Application

$\Delta T =$	25° (14°C)
GPM (L-Min) =	3 (11.3)
kW =	18 kW
Voltage & Phase =	240V 3-Phase
Heater Selected =	HL18

### Example 2: Industrial Application

$\Delta T =$	85° (47°C)
GPM (L-Min) =	6 (22.7)
kW =	108 kW
Voltage & Phase =	480V 3-Phase
Heater Selected =	CNA108

### Example 3: Safety Shower Application

$\Delta T =$	20° (11°C)
GPM (L-Min) =	30 (113.4)
kW =	144 kW
Voltage & Phase =	600V 3-Phase
Heater Selected =	SNA144

# COMMERCIAL WATER HEATERS HL SERIES



## Key Markets

Commercial buildings  
Schools  
Hospitals  
Restaurants  
Science labs  
Sports facilities  
Lodging  
Transportation  
Marine  
Parks and recreation

## Applications

Handwashing  
Mop sinks  
Kitchen booster  
Hydronics  
Remote locations  
Pre-heating for stationary applications or mobile trailers  
Recirculation  
Sanitization  
Potable water distribution

## Features

- 17,000 - 85,304 BTUs
- Low flow activation options at .15 and .25 GPM (0.6 and 0.9 L-Min)
- Bi-metal manual reset
- Liquid-cooled triac switches
- NEMA 1 enclosure standard
- Wall-mounted
- 3/4" (19 mm) connections
- ETL certified to UL Standards



**kW Range**  
5 - 25 kW



**Standard Flow Range**  
0.5 - 7 GPM (1.9 - 26.5 L-Min)



**Standard Voltages**  
208V, 240V, 277V, 480V Single Phase  
208V, 240V, 480V 3-Phase Delta





**Recommended kW:** HL Series (kW): 5, 6, 10, 12, 15, 18, 25

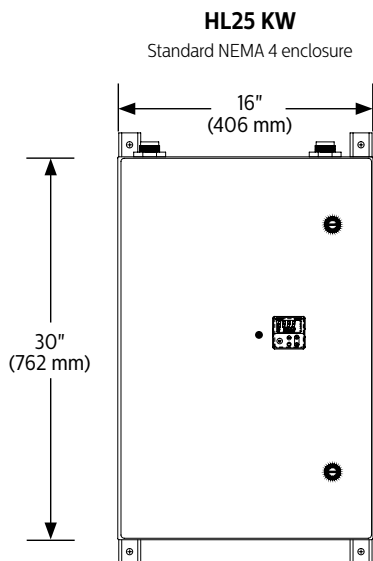
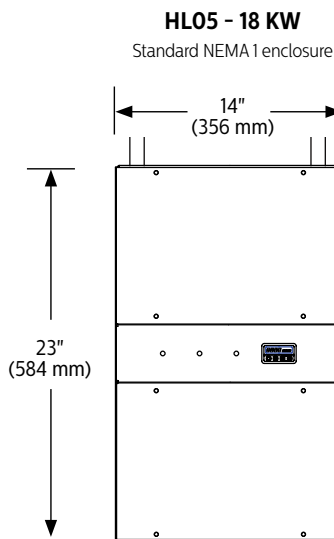
**TEMPERATURE  $\Delta$  °F (°C)**

FLOW	GPM	L-MIN	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°	140°
			(6°)	(8°)	(11°)	(14°)	(17°)	(19°)	(22°)	(25°)	(28°)	(31°)	(33°)	(36°)	(39°)	(42°)	(44°)	(47°)	(50°)	(53°)	(56°)	(58°)	(61°)	(64°)	(67°)	(69°)	(72°)	(75°)	(78°)
	0.15	0.6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	0.25	0.9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6
	0.50	1.9	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	10	10	10	10	10	10	10	10	10	10	12
	0.75	2.8	5	5	5	5	5	5	5	6	6	10	10	10	10	10	10	10	10	12	12	12	15	15	15	15	15	15	18
	1	3.8	5	5	5	5	5	6	6	10	10	10	10	10	12	12	12	15	15	15	15	18	18	18	18	25	25	25	25
	1.5	5.7	5	5	5	6	10	10	10	10	12	15	15	15	18	18	18	25	25	25	25	25	25	25	-	-	-	-	-
	2	7.6	5	5	6	10	10	12	12	15	15	18	18	25	25	25	25	25	-	-	-	-	-	-	-	-	-	-	-
	3	11.3	5	10	10	12	15	18	18	25	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	15.1	6	10	12	12	18	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	18.9	10	12	15	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	22.7	10	15	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7	26.5	12	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sizing for the proper flow rate is important. If the temperature rise required is higher than shown, multiple HL units can be installed or a different Keltech Series is available.

**PRESSURE DROP**

GPM	1	2	3	4	5	6	7
PSI	0	2	4	8	12	17	24
L-MIN	3.8	7.6	11.3	15.1	18.9	22.7	26.5
BAR	0.0	0.1	0.3	0.5	0.8	1.2	1.6



(mm)

Options may change dimensions.  
Check technical data for additional dimensions.

# LIGHT INDUSTRIAL HEATERS C1N & C2N SERIES



## Key Markets

Pharmaceuticals  
Food and beverage  
Waste water treatment plants  
Municipal buildings  
Manufacturing  
Zoos  
Lodging  
Transportation  
Marine

## Applications

Reverse osmosis pre- and post-heating  
Train and truck washing  
Chemical process heating direct/indirect  
Heating de-ionized water  
Heating jacketed equipment  
Potable water distribution  
Heating consumables requiring FDA approval  
Washdown (parts, clean room, sensitive materials, manufacturing)  
Snow melt  
Classified areas  
Recirculation  
Laundry

## Features

- 85,000 - 170,000 BTUs
- Low flow activation options at 0.25 and 0.5 GPM (0.95 and 1.9 L-Min)
- Bi-metal manual reset
- Auto reset high limit switch
- Liquid-cooled solid state relays on C1N
- Fan-cooled solid state relays on C2N
- NEMA 4 enclosure
- Wall- or floor-mounted
- 3/4" (19 mm) connections
- ETL and cETL certified to UL and CSA Standards



**kW Range**  
18 - 50 kW



**Standard Flow Range**  
0.75 - 15 GPM (2.8 - 56.8 L-Min)



**Standard Voltages**  
480V, 600V 3-Phase Delta



Intertek



## **NEW** Portable Keltech C1N & C2N Series

Heavy duty cart packages make it easy to supply heated water or fluids on-demand. Standard and Deluxe option available.



**Recommended kW:** C1N Series (kW): 18, 25 C2N Series (kW): 36, 50

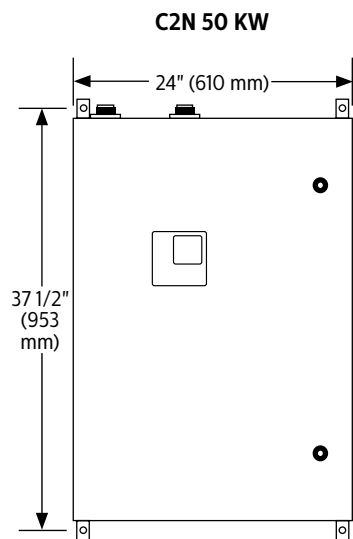
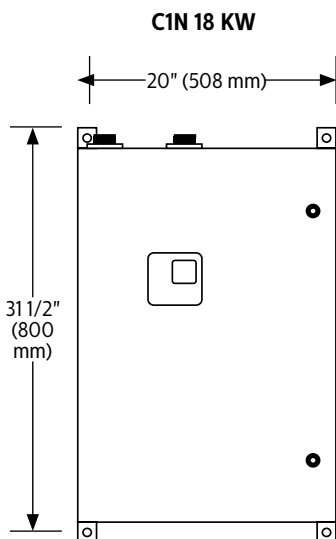
**TEMPERATURE  $\Delta$  °F (°C)**

FLOW	GPM	L-MIN	TEMPERATURE $\Delta$ °F (°C)																											
			10° (6°)	15° (8°)	20° (11°)	25° (14°)	30° (17°)	35° (19°)	40° (22°)	45° (25°)	50° (28°)	55° (31°)	60° (33°)	65° (36°)	70° (39°)	75° (42°)	80° (44°)	85° (47°)	90° (50°)	95° (53°)	100° (56°)	105° (58°)	110° (61°)	115° (64°)	120° (67°)	125° (69°)	130° (72°)	135° (75°)	140° (78°)	
0.75	2.8		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
1.0	3.8		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25
1.5	5.7		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25	25	25	25	25	36	36	36	36
2	7.6		18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25	25	36	36	36	36	36	36	36	36	36	36	36
3	11.3		18	18	18	18	18	18	18	18	25	25	25	36	36	36	36	36	50	50	50	50	50	50	50	50	-	-	-	-
4	15.1		18	18	18	18	18	25	25	36	36	36	36	50	50	50	50	50	-	-	-	-	-	-	-	-	-	-	-	-
5	18.9		18	18	18	25	25	36	36	36	50	50	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	22.7		18	18	18	25	36	36	36	50	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	26.5		18	18	25	36	36	36	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	30.2		18	18	25	36	36	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	34.0		18	25	36	36	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	37.8		18	25	36	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	56.8		25	36	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sizing for the proper flow rate is important. If the temperature rise required is higher than shown, multiple C1N or C2N units can be installed or a different Keltech Series is available.

**PRESSURE DROP**

GPM	1	2	3	4	5	6	8	10
C1N PSI	0	1	2	3	4	5	7	10
C2N PSI	1	2	3	4	5	6	8	10
L-MIN	3.8	7.6	11.3	15.1	18.9	22.7	30.2	37.8
C1N BAR	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.7
C2N BAR	0.0	0.1	0.2	0.3	0.3	0.4	0.6	0.7



(mm)  
Options may change dimensions. Check technical data for additional dimensions.

# LARGE INDUSTRIAL HEATERS CNA SERIES



## Key Markets

- Mining
- Breweries/wineries
- Petro/chemical
- Food and beverage
- Agriculture/livestock
- Lumber/pulp/paper mills
- Waste water treatment plants
- Power generation
- Nuclear

## Applications

- Scrubbers
- Nuclear reactor washdown
- Classified areas
- Snow melt
- Heating consumables
- Heating jacketed equipment
- Bio-diesel production
- Fracking injectables
- Stadium/Ice arena resurfacers filling
- Chemical process heating direct/indirect
- Washdown (parts, vats, containers, large equipment)

## Features

- 122,800 - 491,300 BTUs
- Bi-metal manual reset
- Auto reset high limit switch
- Door cutoff switch
- Emergency stop button
- Liquid-cooled solid state relays
- NEMA 4 enclosure
- Floor-mounted
- 1-1/4" (32 mm) connections
- ETL and cETL certified to UL and CSA Standards



**kW Range**  
36 - 144 kW



**Flow Range**  
1.5 - 50 GPM (5.7 - 189 L-Min)



**Standard Voltages**  
480V, 600V 3-Phase Delta



## **NEW** Portable Keltech CNA Series

Heavy duty cart packages make it easy to supply heated water or fluids on-demand. Standard and Deluxe option available.



**Recommended kW:** CNA Series (kW): 36, 54, 63, 72, 108, 126, 144

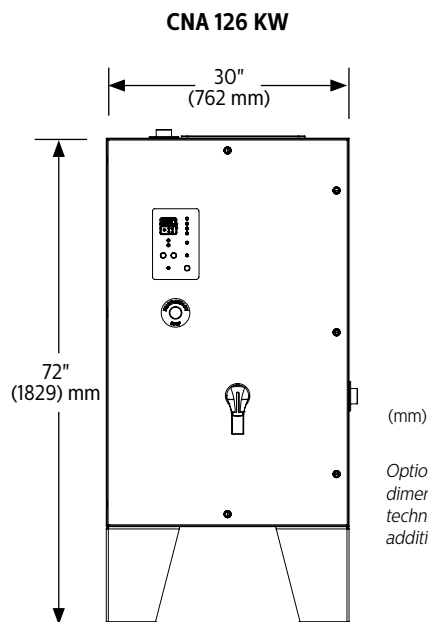
**TEMPERATURE Δ°F (°C)**

FLOW	GPM	L-MIN	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°	140°
			(6°)	(8°)	(11°)	(14°)	(17°)	(19°)	(22°)	(25°)	(28°)	(31°)	(33°)	(36°)	(39°)	(42°)	(44°)	(47°)	(50°)	(53°)	(56°)	(58°)	(61°)	(64°)	(67°)	(69°)	(72°)	(75°)	(78°)
1.5	5.7	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
2	7.6	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
3	11.3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
4	15.1	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
5	18.9	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
6	22.7	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
7	26.5	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
8	30.2	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
9	34.0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
10	37.8	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
12	45.4	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
15	56.7	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
20	75.6	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
25	94.5	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
30	113.4	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
35	132.3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
40	151.2	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
45	170.1	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
50	189.0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36

CNA Series 36-144 kW  
 ASME certification available

**PRESSURE DROP**

GPM	1.5	2	3	4	5	6	8	10	15	20	25	30	35	40	45	50
36 - 63 KW PSI	0.0	0.0	0.1	0.2	0.2	0.3	0.6	0.9	2.0	3.6	5.5	7.9	10.8	14.0	17.6	21.7
72 - 144 KW PSI	0.0	0.0	0.1	0.2	0.3	0.4	0.8	1.2	2.6	4.7	7.3	10.4	14.2	18.5	23.3	28.7
L-MIN	5.7	7.6	11.3	15.1	18.9	22.7	30.2	37.8	56.7	75.6	94.5	113.4	132.3	151.2	170.1	189
36 - 63 KW BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.5	0.7	1.0	1.2	1.5
72 - 144 KW BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.2	1.3	1.6	2.0



ASME Certification: Keltech units 63kW and over are the only electric tankless water heaters registered with the National Board and certified with the HLW stamp

# SAFETY EYEWASH HEATERS CLE SERIES



## Key Markets

- Pharmaceuticals
- Food and beverage
- Waste water treatment plants
- Municipal buildings
- Manufacturing
- Zoos
- Lodging
- Transportation
- Marine

## Applications

- Emergency eyewash systems
- Hazardous chemical environments
- Scientific laboratories
- Manufacturing environments

## Features

- Temperature output fixed at 80°F (27°C)
- Meets the ANSI/ISEA Z358.1 standards
- Provide continuous tepid water for multiple incidents with zero recovery time and custom-tuned for minimal overshoot
- 85,000 - 170,000 BTUs
- Bi-metal manual reset
- Auto reset high limit switch
- Liquid-cooled solid state relays
- NEMA 4 enclosure
- Wall- or floor-mounted
- 3/4" (19 mm) connections
- ETL and cETL certified to UL and CSA Standards
- Temperature safety values:
  - Controller alarm 90°F (32°C)
  - Auto reset high limit switch 95°F (35°C)
  - Bi-metal manual reset 100°F (38°C)



**kW Range**  
18 - 25 kW



**Standard Flow Range**  
0.75 - 10 GPM (3 - 37.8 L-Min)



**Standard Voltages**  
480V, 600V 3-Phase Delta







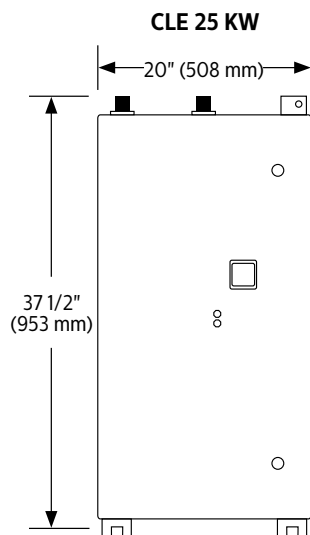
**Recommended kW:** CLE Series (kW): 18, 25

**TEMPERATURE Δ °F (°C)**

FLOW	GPM	L-MIN	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°	140°
			(6°)	(8°)	(11°)	(14°)	(17°)	(19°)	(22°)	(25°)	(28°)	(31°)	(33°)	(36°)	(39°)	(42°)	(44°)	(47°)	(50°)	(53°)	(56°)	(58°)	(61°)	(64°)	(67°)	(69°)	(72°)	(75°)	(78°)
0.75	2.8		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
1.0	3.8		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25
1.5	5.7		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25	25	25	25	-	-	-	-	-
2	7.6		18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25	25	-	-	-	-	-	-	-	-	-	-
3	11.3		18	18	18	18	18	18	18	18	25	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	15.1		18	18	18	18	18	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	18.9		18	18	18	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	22.7		18	18	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	26.5		18	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	30.2		18	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	34.0		18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	37.8		18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**PRESSURE DROP**

<b>GPM</b>	1	2	3	4	5	6	8	10
<b>PSI</b>	0	1	2	3	4	5	7	10
<b>L-MIN</b>	3.8	7.6	11.3	15.1	18.9	22.7	30.2	37.8
<b>BAR</b>	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6



Pair CLE Series heaters with Bradley wall or pedestal mounted Eye or Eye/Face Washes

Bradley Models shown: S19224 and S19214 with Halo™ technology  
See all models on [bradleycorp.com](http://bradleycorp.com)

# SAFETY SHOWER HEATERS SNA SERIES



**kW Range**  
36 - 144 kW



**Flow Range**  
1.5 - 50 GPM (5.7 - 189 L-Min)



**Standard Voltages**  
480V, 600V 3-Phase Delta



## Key Markets

Mining  
Breweries/wineries  
Petro/chemical  
Food and beverage  
Agriculture/livestock  
Lumber/pulp/paper mills  
Waste water treatment plants  
Power generation  
Nuclear

## Applications

Emergency shower or combination shower/eyewash systems  
Hazardous chemical environments  
Scientific laboratories  
Manufacturing environments

## Features

- Temperature output fixed at 80°F (27°C)
- Meets the ANSI/ISEA Z358.1 standards
- Provide continuous tepid water for multiple incidents with zero recovery time and custom-tuned for minimal overshoot
- Dual flow activation for reduced overshoot and energy savings
- 122,800 - 491,300 BTUs
- Bi-metal manual reset
- Auto reset high limit switch
- TepidGuard™ temperature overshoot purge system protects the end user
- Emergency stop button
- Liquid-cooled solid state relays
- NEMA 4 Enclosure
- Floor-mounted
- 1-1/4" (32 mm) connections
- ETL and cETL certified to UL and CSA Standards
- Temperature safety values:
  - Controller alarm 90°F (32°C)
  - Auto reset high limit switch 95°F (35°C)
  - Overshoot purge 95°F (35°C)
  - Bi-metal manual reset 100°F (38°C)

ASME Certification: Keltech units 63kW and over are the only electric tankless water heaters registered with the National Board and certified with the HLW stamp



**Recommended kW:** SNA Series (kW): 36, 54, 63, 72, 108, 126, 144

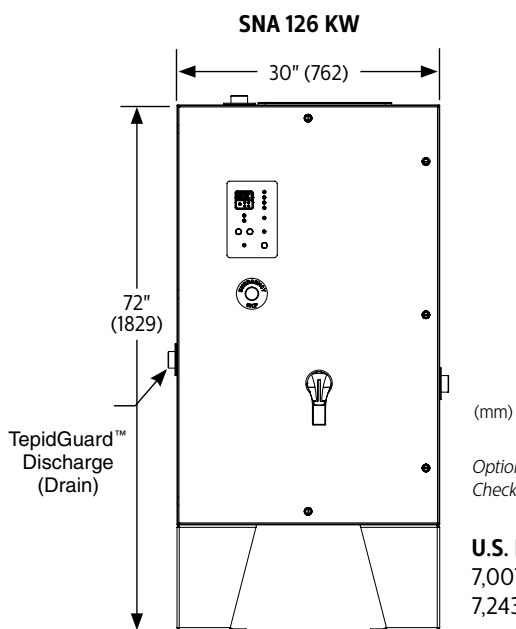
**TEMPERATURE Δ°F (°C)**

FLOW	GPM	L-MIN	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°	140°
			(6°)	(8°)	(11°)	(14°)	(17°)	(19°)	(22°)	(25°)	(28°)	(31°)	(33°)	(36°)	(39°)	(42°)	(44°)	(47°)	(50°)	(53°)	(56°)	(58°)	(61°)	(64°)	(67°)	(69°)	(72°)	(75°)	(78°)
1.5	5.7	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
2	7.6	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
3	11.3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
4	15.1	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
5	18.9	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
6	22.7	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
7	26.5	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
8	30.2	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
9	34.0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
10	37.8	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
12	45.4	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
15	56.7	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
20	75.6	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
25	94.5	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
30	113.4	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
35	132.3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
40	151.2	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
45	170.1	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
50	189.0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36

SNA Series 36-144 kW  
ASME certification available

**PRESSURE DROP**

GPM	1.5	2	3	4	5	6	8	10	15	20	25	30	35	40	45	50
36 - 63 KW PSI	0.0	0.0	0.1	0.2	0.2	0.3	0.6	0.9	2.0	3.6	5.5	7.9	10.8	14.0	17.6	21.7
72 - 144 KW PSI	0.0	0.0	0.1	0.2	0.3	0.4	0.8	1.2	2.6	4.7	7.3	10.4	14.2	18.5	23.3	28.7
L-MIN	5.7	7.6	11.3	15.1	18.9	22.7	30.2	37.8	56.7	75.6	94.5	113.4	132.3	151.2	170.1	189
36 - 63 KW BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.5	0.7	1.0	1.2	1.5
72 - 144 KW BAR	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.2	1.3	1.6	2.0



Options may change dimensions.  
Check technical data for additional dimensions.

**U.S. PATENTS:**  
7,007,316 B2,  
7,243,381 B2



Pair SNA Series shower heaters with Bradley Drench Showers or Combination Eye/Face Wash Drench Showers with Halo™ technology and SpinTec™ sprayhead

Bradley Model shown: SI9314  
See all models on [bradleycorp.com](http://bradleycorp.com)

# DESIGN ON DEMAND SOLUTIONS

## CNA & SNA SKID SERIES



### Keltech Skid Systems

#### A complete solution in one compact and portable package

Keltech Skid Series are easy to specify for your unique application and can be easily transported with a forklift. Connect a water and power supply and the Keltech Skid Series is ready for any situation – even remote locations.

- Electric tankless water heater
- Pre-piped & assembled
- Mounted on portable, pre-assembled steel skid
- Back-to-back CNA & CNAR or SNA & SNAR heaters
- Safety systems

### Applications

Emergency shower or combination shower/eyewash systems  
Hazardous chemical environments  
Power plants

Mining  
Manufacturing environments  
Waste water treatment plants  
Process Heating



#### MODEL CNA-SKID

- Pre-piped, pre-assembled skid system
- Back-to-back CNA & CNAR large industrial heaters
- Higher flow industrial water heating applications
- Transportable



#### MODEL SNA-SKID

- Pre-piped, pre-assembled skid system
- Back-to-back SNA & SNAR safety heaters
- Higher flow demand safety fixture applications
- Transportable



# DESIGN ON DEMAND SOLUTIONS

## S19361 & S19361F



### MODEL S19361

Safety skid with tankless heater and safety fixture

#### Tankless Heater

- Includes SNA heater with a Bradley emergency fixture, drain pan and drain, pre-assembled to skid
- NEW TepidGuard™ discharge thermally protects water inside the heater during use and stand-by
- Meets ANSI/ISEA Z358.1 standards
- Provide continuous tepid water for multiple incidents with zero recovery time
- ETL and cETL certified to UL and CSA Standards

#### Combination Drench Shower & Eye/Face Wash

- Dual eye/face wash with Halo™ Technology provides 85% facial coverage – best in the industry
- Bowl and SpinTec™ Showerhead: stainless steel or ABS plastic
- Hinged dust cover in stainless steel or plastic
- Piping options: stainless steel or galvanized steel protected with BradTect™ corrosion-resistant yellow coating
- Exceeds minimum water flow of 3 GPM (11.4 L) at 30 PSI (2.0 bar)
- UL classified to meet ANSI/ISEA Z358.1

S19361: choose from the most popular Bradley emergency combination fixtures

S19314FW



S19314PDCFW



S19314FSS



S19314SC



S19314GG



### MODEL S19361F

Freeze protected safety skid with tankless heater and safety fixture

#### Tankless Heater

- Includes single freeze protected SNA heater with freeze protected Bradley emergency fixture, drain pan, pre-assembled to skid
- NEW TepidGuard™ discharge thermally protects water inside the heater during use and stand-by
- Meets ANSI/ISEA Z358.1 standards
- Provide continuous tepid water for multiple incidents with zero recovery time
- ETL and cETL certified to UL and CSA Standards

#### Combination Drench Shower & Eye/Face Wash

- Electric heat trace cable
  - Thermal rating: 5 watts/foot (31 cm)
  - Self regulated to -50°F (-45.5°C)
  - Protects against overheating and cold spots
  - 3/4" (19 mm) polyethylene pipe insulation
- ABS plastic outer shell with four easy-to-remove sections and sealed with vinyl trim
- Thermostat opens at 64°F (18°C) and closes at 54°F (12°C)
- Valve opens at 35°F (2°C) internal water temperature to prevent freezing
- 1/2" (13 mm) eyewash valve and 1" (25 mm) shower valve
- UL Plumbing listed to meet ANSI/ISEA Z358.1 and CSA certified 161166

See [bradleycorp.com](http://bradleycorp.com) for all technical specifications and additional information

# DESIGN ON DEMAND SOLUTIONS CUSTOM APPLICATIONS



## Design on Demand

Bradley's standard Keltech Skid Series are engineered for durability and performance in any industrial application. And, when unique environments require innovative solutions, Bradley Engineers design custom systems for any heating need, including Emergency Fixtures or Enclosed Safety Showers installed with Keltech Tankless Heaters.

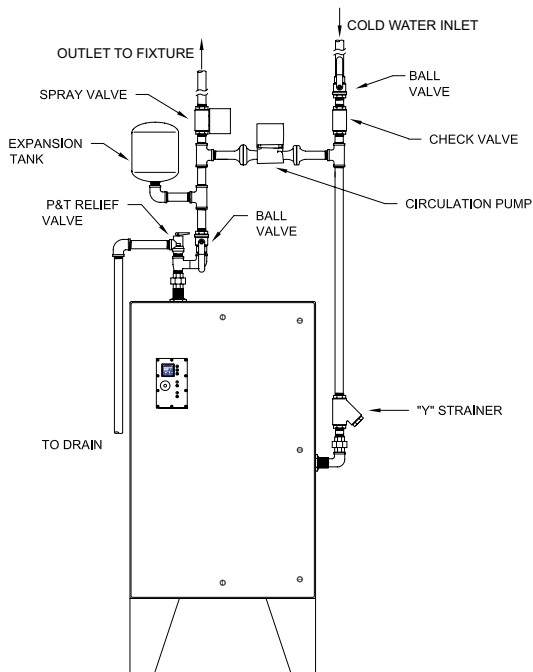
- When recirculation or a booster heater is needed, Keltech fully-modulating liquid-cooled heaters are the perfect solution.
- When the run is too long or pressure is too low, Keltech booster systems are pre-piped and ready; they can be installed in series or in parallel.
- Custom solutions available for your unique application requirements.
- Work directly with a Keltech System Design Consultant.

Contact Bradley's Industrial Team for a free design consultation:

**[designondemand@bradleycorp.com](mailto:designondemand@bradleycorp.com)**

**[www.bradleycorp.com/design-on-demand](http://www.bradleycorp.com/design-on-demand)**

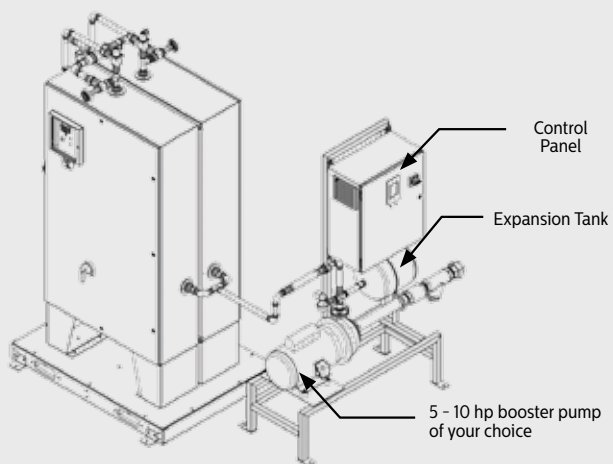




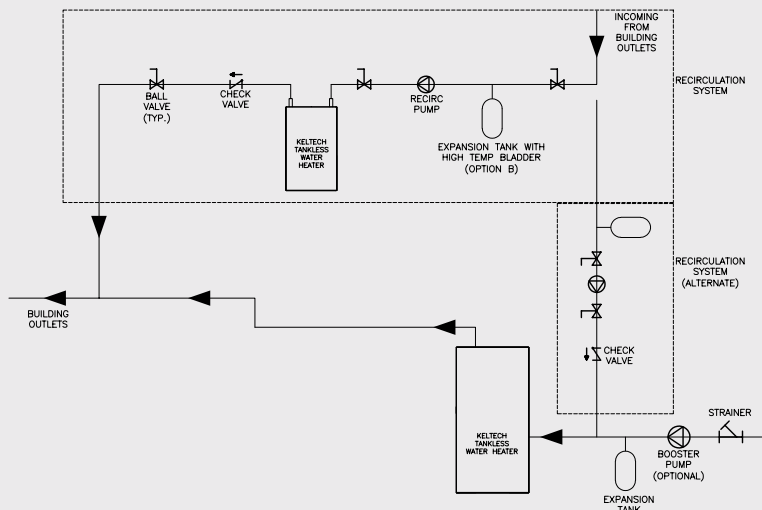
CNA 144 kW unit with integral recirculation for ultra low flow and zero lag time.



SNA-SKID: SNA & SNAR back-to-back for high volume flow rates.



Parallel booster system: SNA-SKID: SNA & SNAR back-to-back 144 kW heaters.



Typical Keltech heater used in a recirculation system with or without booster heater.



BIM-REVIT models available on [bradleycorp.com](http://bradleycorp.com)



**PRECISE. RELIABLE. DURABLE. TANKLESS.**

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