



25+
YEARS

**CUSTOMER
SATISFACTION**

DESIGN. ENGINEERING. VALUE.



KELTECH ELECTRIC TANKLESS WATER HEATERS

**Hot water for the world's most demanding
applications. On time. Every time.**



KELTECH-INC.COM

DESIGN. ENGINEERING. VALUE.

Keltech Incorporated is the recognized leader in commercial-grade electric tankless hot water systems. Whether your application is industrial, in hotels, stadiums, food processing, or safety, Keltech has a tankless solution. With unmatched quality and durability, Keltech heaters are the fastest, most reliable, and most efficient tankless water heaters in the industry.

Keltech Incorporated, a subsidiary of Bradley Corporation, has manufactured tankless water heaters for over 25 years and offers a product line with an extensive range of applications as well as custom designs. For more than 90 years, Bradley Corporation has manufactured commercial safety, water tempering, and washroom products. Today, Bradley's combined companies are the industry's most comprehensive source for 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 lot of space. Keltech tankless water heaters only require three square feet 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.



729 SOUTH GROVE STREET
DELTON, MI 49046

800.999.4320 | 269.623.6395



For more than 115 years combined, Keltech, Inc. and Bradley Corporation are proud to be American manufacturers.

Revit-BIM models available
for all Keltech series at
keltech-inc.com

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INSTALLATIONS



KELTECH TANKLESS HEATERS INSTALLED WORLDWIDE

3M Company

Alaska Pacific Water Group

Allegheny Energy Supply

American Electric Power

Archer Daniels Midland

BC Place Stadium - 2010 Olympics

Bechtel Power Group

Becton Dickenson

Black & Veatch

Boeing

Bombardier Aerospace

CB&I

CH2M Hill

Chevron

Con Edison

Conoco Phillips

Day & Zimmerman

Dow Corning

Duke Energy

Entergy

Exxon Mobil

FLSmidth

Florida Power and Light

GE Power

Georgia Pacific

Hemlock Semiconductor

Honeywell

Jacobs

Johnson March

Johnson Matthey

Kimberly Clark

PPG Industries

Shaw Group

Shell Energy

Siemens

SNC-Lavalin

Southern Company

Steris Corp

United Airlines

United States Coast Guard

United States Navy

US Filter Company

US Gypsum

Wacker Siltronic Corp

Westinghouse

Xerox

Xstrata Nickel

COST BENEFIT >

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, in addition to the remote location and large scope and scale of the project.

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. Standard options were added as needed to meet location and environmental conditions within and outside the manufacturing facilities.

The solution included safety showers, emergency eyewash heaters, fixtures, and integrated systems that were installed with NEMA 4 enclosures, providing employees access to a compliant and safe station every 45-55 feet throughout the 13 facilities and surrounding environment. Keltech's CLE and SN Series solutions provided a tepid water solution that met many challenges, including compliance. As a result, the organization realized 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 annually to operate. Due to its on-demand energy consumption, Keltech's tankless water heating solution would cost only \$2,300 annually.

99.3% SAVINGS

THE KELTECH ADVANTAGE

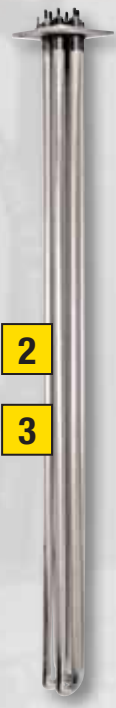
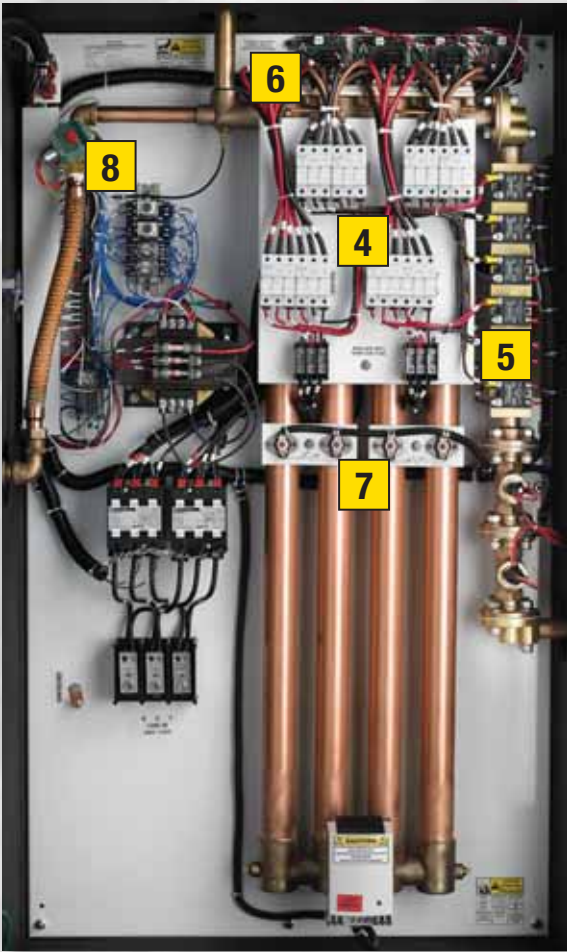
- 1 PID Temperature Controller** More energy efficient and reliable than traditional microprocessors, Keltech heaters hold temperature as demand changes regardless of incoming ground water temperature.
- 2 Incoloy 800 Elements** Recognized for protection, durability, and resistance to scaling from hard 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 Manual Reset Cutoff** 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 Overshoot Purge Protection** Standard on SN safety heaters, this patented anti-scald protection will automatically open 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 braised 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. Keltech's 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 can be ordered to meet NSF/ANSI 372.
- **Third-Party Certified** ETL listed to UL499, C-ETL listed to CSA22.2.
- **ASME Certified** Keltech CN & SN units (over 57kW) are the only electric tankless water heaters National Board certified with the HLW stamp.



Revit-BIM models available for all Keltech series at keltech-inc.com



WHICH WOULD YOU TRUST? >

Keltech's 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



	COMMERCIAL	LIGHT INDUSTRIAL	LARGE INDUSTRIAL	EMERGENCY EYEWASH	SAFETY SHOWER
KELTECH SERIES:	HL	C1N & C2N	CN	CLE	SN
KW RANGE	5 - 18 kW	18 - 50 kW	36 - 144 kW	18 - 25 kW	36 - 144 kW
FLOW RANGE	0.15 - 7 GPM (0.6 - 26.5 L-Min)	0.75 - 10 GPM (2.8 - 37.8 L-Min)	1.5 - 40 GPM (5.7 - 151.2 L-Min)	0.75 - 10 GPM (3 - 37.8 L-Min)	1.5 - 40 GPM (5.7 - 151.2 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		•	•	•
	Manual reset cutoff	•	•	•	•
	Overshoot bypass protection				•
	Low flow activation	○			
	LCD touch pad operation	•	•	•	•
	Standard NEMA enclosure	NEMA 1	NEMA 4	NEMA 4	NEMA 4
	NEMA 4X	○	○	○	○
	Lead-free	•	•	•	•
	Wall-mounted	•	•	○	•
	Floor-mounted		○	•	○
	Computer interface 4-20 mA	○	○	○	○
	High temp package 160° - 190°F (71° - 88°C)	○	○	○	
	Freeze protection -23°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		○	○	○	
Rack mount system	○				
CERTIFICATIONS	ETL listed to UL499	•	•	•	•
	C-ETL listed to CSA22.2		•	•	•
	ASME certified (> 57 kW)			○	○

- 1 Calculate Delta T (ΔT Rise in Temperature):**
Desired Set Point - Coldest Groundwater Temperature = ΔT
- 2 Maximum flow for application**
- 3 Select the kW required for application by using the table below or calculate:**
Peak Demand (GPM) x ΔT 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 ΔT for your application.**

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

KW CALCULATOR

		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	6	6	10	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	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	50	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	50	50	50	50	54	63	63	63	72	72	108	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	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	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- HL Series** 5-18 kW
- C1N or CLE Series** 18-25 kW
- C2N Series** 36-50 kW
- CN or SN Series** 36-144 kW
- Recommend 144 kW for minimal pressure drop

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 =	CN108

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 =	SN144

COMMERCIAL WATER HEATERS

HL SERIES



kW Range
5 - 18 kW



Flow Range
0.15 - 7 GPM (0.6 - 26.5 L-Min)



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

- 17,000 - 61,400 BTUs
- Low flow activation options at .15 and .25 GPM (0.6 and 0.9 L-Min)
- Manual reset cutoff
- Liquid-cooled solid state relays
- NEMA 1 enclosure
- Wall-mounted
- 3/4" connections
- ETL certified to UL Standards



Lead-Free NSF/ANSI 372

KW CALCULATOR >

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

		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°)	
	0.15	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	5	6
	0.50	1.9	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	10	10	10	10	10	10	10	10	10	10	10	12	
	0.75	2.8	5	5	5	5	5	5	5	5	6	6	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	-	-	-	-	-	
	1.5	5.7	5	5	5	6	10	10	10	10	12	15	15	15	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2	7.6	5	5	6	10	10	12	12	15	15	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	3	11.3	5	10	10	12	15	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	4	15.1	6	10	12	12	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	5	18.9	10	12	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	6	22.7	10	15	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	7	26.5	12	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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.

KEY MARKETS

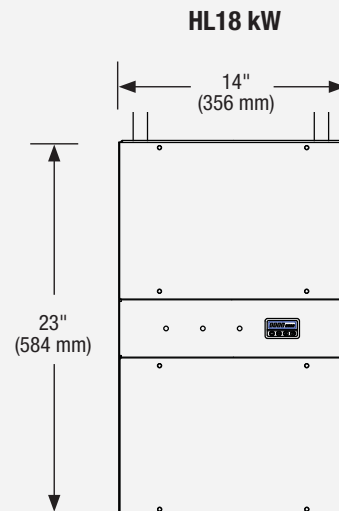
- Commercial buildings
- Schools
- Hospitals
- Restaurants
- Science labs
- Sports facilities
- Lodging
- Transportation
- Marine
- Parks and recreation

APPLICATIONS

- Handwashing
- Mop sinks
- Kitchen booster
- Hydronics
- Remote locations
- Pre-heating
- Recirculation
- Sanitization
- Potable water distribution



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



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

LIGHT INDUSTRIAL WATER HEATER

C1N & C2N SERIES



kW Range
18 - 50 kW



Flow Range
0.75 - 10 GPM (2.8 - 37.8 L-Min)



Standard Voltages
480V, 600V 3-Phase Delta

- 85,000 - 170,000 BTUs
- Manual reset cutoff
- 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" connections
- ETL and cETL certified to UL and CSA Standards

**Lead-Free
NSF/ANSI
372 option
available**

KW CALCULATOR

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

		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	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	36	36	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	50	50	50	50
	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	-	-	-	-	-	-
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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.

KEY MARKETS

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

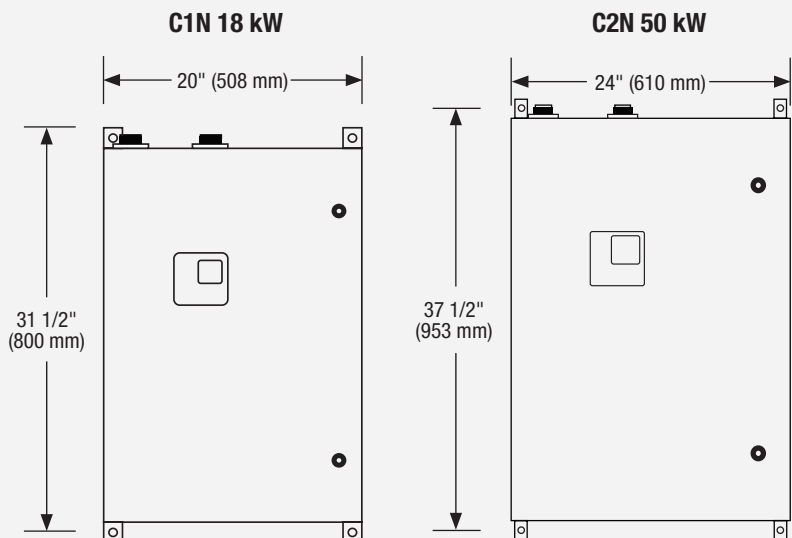
APPLICATIONS

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



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	

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



LARGE INDUSTRIAL WATER HEATER

CN SERIES



kW Range
36 - 144 kW



Flow Range
1.5 - 40 GPM (5.7 - 151.2 L-Min)



Standard Voltages
480V, 600V 3-Phase Delta

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

ASME Certification:
Keltech units over 57kW are the only electric tankless water heaters National Board certified with the HLW stamp

KW CALCULATOR

CN Series (kW): 36, 54, 63, 72, 108, 126, 144

		TEMPERATURE $\Delta^{\circ}\text{F}$ ($^{\circ}\text{C}$)																												
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	36

CN Series 36-144 kW
 ASME certification available
 Recommend 144 kW for minimal pressure drop

KEY MARKETS

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

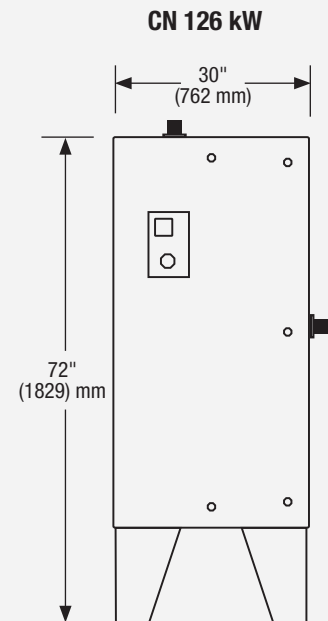
APPLICATIONS

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



PRESSURE DROP																
GPM	1	2	3	4	5	6	8	10	15	20	25	30	35	40	45	50
36 - 126 kW PSI	2	2	2	3	3	4	5	6	10	16	23	32	43	55	69	84
144 kW PSI	0.2	0.4	1	1	1	1	2	3	5	8	11	16	21	26	33	40
L-MIN	3.8	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 - 126 kW BAR	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	1.1	1.6	2.2	2.9	3.8	4.7	5.8
144 kW BAR	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.1	1.4	1.8	2.3	2.8

 Recommend -PD option



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

EMERGENCY EYEWASH HEATERS

CLE SERIES



kW Range
18 - 25 kW



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



Standard Voltages
480V, 600V 3-Phase Delta

- Temperature output fixed at 80°F (27°C)
- Meets the ANSI 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
- Manual reset cutoff
- Auto reset high limit switch
- Liquid-cooled solid state relays
- NEMA 4 enclosure
- Wall- or floor-mounted
- 3/4" 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)
 - Manual reset cutoff 100°F (38°C)

Lead-Free NSF/ANSI 372 option available

KW CALCULATOR

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	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	-	-	-	-	-	
2	7.6	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	25	25	25	25	-	-	-	-	-	-	-	-	
3	11.3	18	18	18	18	18	18	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

APPLICATIONS

Emergency eyewash systems
 Hazardous chemical environments
 Scientific laboratories
 Manufacturing environments

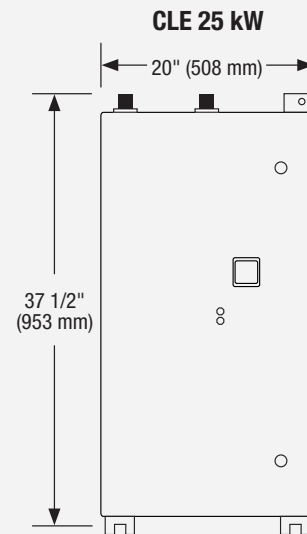


Pair CLE Series shower heaters with
 Bradley wall or pedestal mounted
 Eye or Eye/Face Washes

Models shown: S19224 and S19214



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



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

SAFETY SHOWER HEATERS

SN SERIES



kW Range
36 - 144 kW



Flow Range
1.5 - 40 GPM (5.7 - 151.2 L-Min)



Standard Voltages
480V, 600V 3-Phase Delta

- Temperature output fixed at 80°F (27°C)
- Meets the ANSI Z358.1 standards
- Provide continuous tepid water for multiple incidents with zero recovery time and custom-tuned for minimal overshoot
- Dual flow switches for reduced overshoot and energy savings
- 122,800 - 491,300 BTUs
- Manual reset cutoff
- Auto reset high limit switch
- Door cutoff switch
- Emergency stop button
- Liquid-cooled solid state relays
- NEMA 4 Enclosure
- Floor-mounted
- 1" 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)
 - Manual reset cutoff 100°F (38°C)

ASME Certification: Keltech units over 57kW are the only electric tankless water heaters National Board certified with the HLW stamp

KW CALCULATOR

SN 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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	36

SN Series 36-144 kW
 ASME certification available
 Recommend 144 kW for minimal pressure drop

APPLICATIONS

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

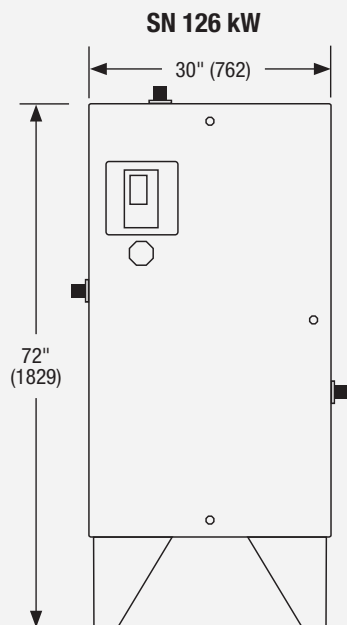
Pair SN Series shower heaters with
 Bradley Drench Showers or Combination
 Eye/Face Wash Drench Showers

Model shown: S19314



PRESSURE DROP																
GPM	1	2	3	4	5	6	8	10	15	20	25	30	35	40	45	50
36 - 126 kW PSI	2	2	2	3	3	4	5	6	10	16	23	32	43	55	69	84
144 kW PSI	0.2	0.4	1	1	1	1	2	3	5	8	11	16	21	26	33	40
L-MIN	3.8	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 - 126 kW BAR	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	1.1	1.6	2.2	2.9	3.8	4.7	5.8
144 kW BAR	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.1	1.4	1.8	2.3	2.8

 Recommend -PD option



(mm)

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

U.S. Patents:
 7,007,316 B2,
 7,243,381 B2

YOUR DESIGN ON DEMAND



SKID MOUNTED, PARALLEL & BOOSTER SYSTEMS TO NAME A FEW

Whether you need a complete safety shower station in one compact, portable package or multiple heaters installed in parallel, there is a Keltech turn-key solution to fit the needs of your design.

- SN shower stations can be easily transported with a forklift and installed in almost any location. Connect a water and power supply and the shower station is ready for duty.
- When recirculation or a booster heater is needed, Keltech fully-modulating fan-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 with parallel heaters.
- Custom solutions available for your unique application requirements.

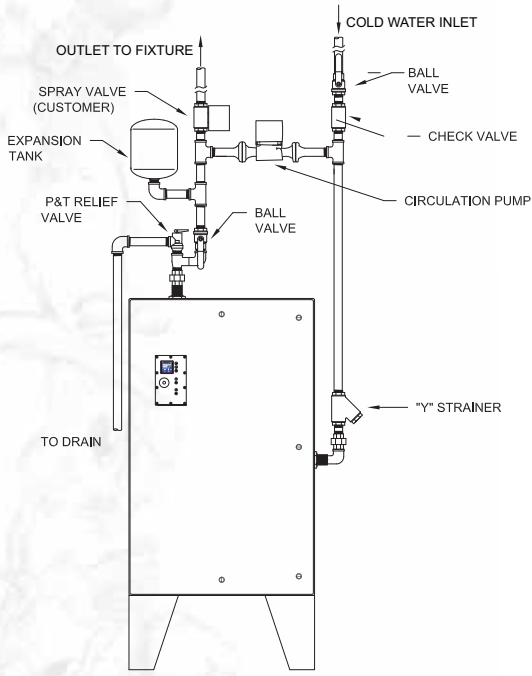
Freeze Protected and Enclosed Safety Shower options available. Ask your Keltech Representative for information.



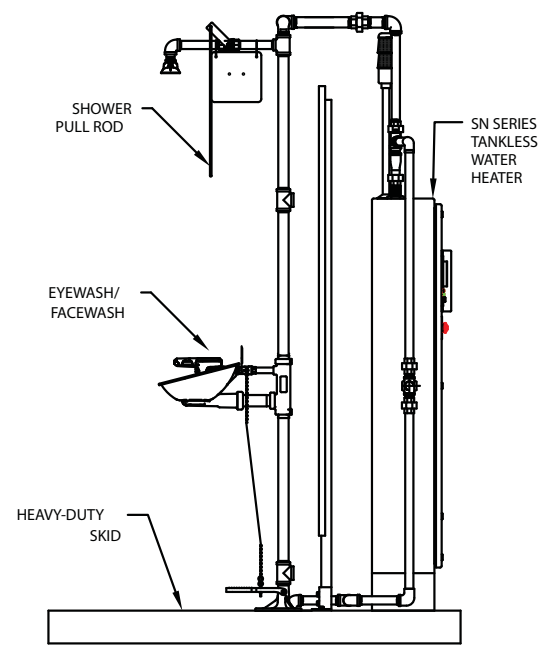
SN heater with Bradley S19314 safety fixture pre-piped, assembled, and mounted on a portable steel skid.



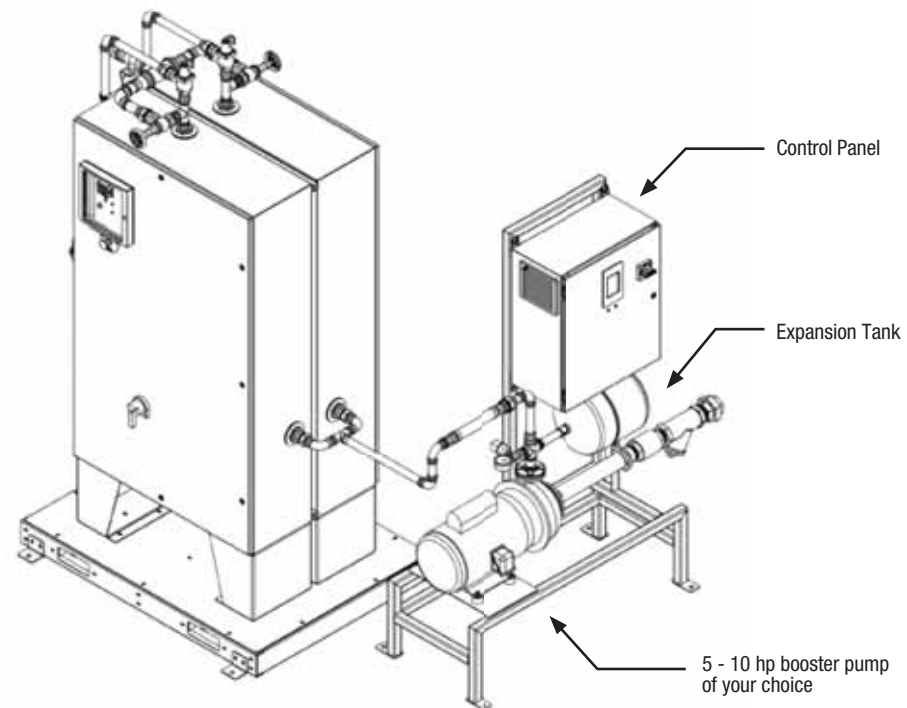
SN heater with stack alarm, freeze protection distributed control system, and Bradley freeze protected S19-300 safety fixture mounted on a portable steel skid.



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



SN 144 kW unit with Bradley S19314 Combination Drench Shower and Halo™ Eye/Face Wash mounted on a portable skid.



Parallel booster system with two SN 144 kW heaters.

PROCESS FILL DUPLICATION

INTEGRIFILL SERIES



kW Range
46 kW



Flow Rate
1.5 GPM (5.7 L-Min)



Standard Voltages
480V 3-Phase Delta

- Hybrid system heats water as it cycles on demand for time savings
- Water is recycled: no refilling, no reheating, and no recovery period
- No tank to rust or corrode means less maintenance
- Tankless system's smaller footprint maximizes floor space
- Portable for operation anywhere with power, water, and drain
- LCD touch screen for easy operation
- Automatic standby mode for energy savings
- Looped system requires no water-filled tank and saves water
- Maximum temperature output 205°F (96°C), Optional 210°F (99°C)

Swift Cycle Technology

Swift Cycle™ Technology allows you to heat and dispense water with precision. Combining the benefits of tank and tankless heating systems, Swift Cycle Technology duplicates process-fill applications permitting short and long burst cycles of tempered water guaranteed to be within one to two degrees fahrenheit of the setpoint.

A closed-loop water heating system uses full power to bring the water up to temperature, but only uses enough power to overcome heat loss through the insulated tubes during stabilized operation. This minimizes energy consumption by using the full modulation capabilities of the PID control system used in other Keltech tankless heaters.

KEY MARKET

Food and beverage

APPLICATIONS

Research and development

Design verification

Prototyping

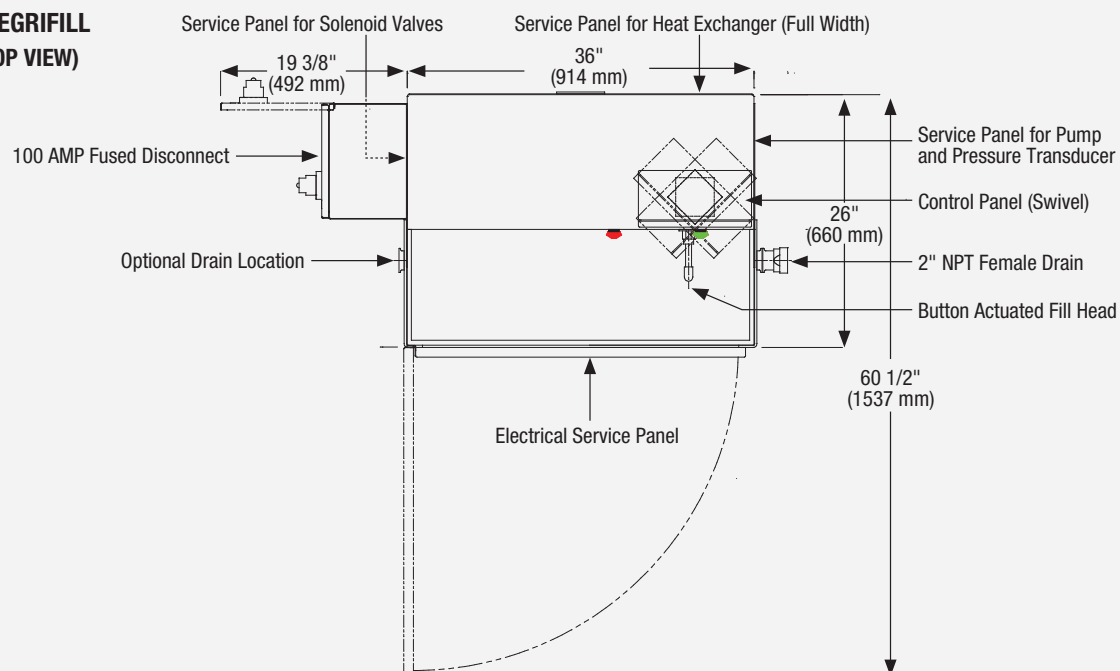
In-line testing

Bottle washing

Sanitization



INTEGRIFILL (TOP VIEW)



DESIGN. ENGINEERING. VALUE.

