Bradley Electric Tankless Water Heaters

PRECISE. RELIABLE. DURABLE. TANKLESS.

Fluid heating for safety, commercial and industrial applications.

bradleycorp.com

Bradley

A WATTS Brand

Design. Engineering. Value.

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

Bradley tankless heaters are offered in a full line of products for an extensive range of applications as well as custom designs for unique environments. These 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 100 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. Bradley tankless heaters only heat water when needed. And, the 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. Bradley 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.

MADE in the USA
OF U.S. AND IMPORTED MATERIALS

Bradley is proud to be an American manufacturer for more than 100 years.

Contents

BIM-REVIT models available for all Tankless Water Heaters at 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.

Bradley'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 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. Bradley'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, This tankless water heating solution would cost only $2,300 annually.

99.3% Cost Savings

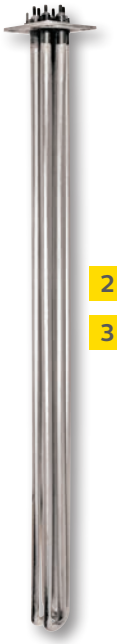
The Bradley Advantage

1	**PID Temperature Controller**	More energy efficient and reliable than traditional microprocessors, Bradley 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 Bradley 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	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

BIM-Revit models available for all tankless water heaters at bradleycorp.com



Which would you trust?

Bradley 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. Bradley'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

	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 Integration	○	○	○		
	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 (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.**

ΔT =	
GPM (L-Min) =	
kW =	
Voltage & Phase =	
Heater Selected =	

Visit bradleycorp.com to use our product sizing calculator

kW Recommendation

Temperature ΔºF (ºC)

Flow GPM	L-Min	10º (6º)	15º (8º)	20º (11º)	25º (14º)	30º (17º)	35º (19º)	40º (22º)	45º (25º)	50º (28º)	55º (31º)	60º (33º)	65º (36º)	70º (39º)	75º (42º)	80º (44º)	85º (47º)	90º (50º)	95º (53º)	100º (56º)	105º (58º)	110º (61º)	115º (64º)	120º (67º)	125º (69º)	130º (72º)	135º (75º)	140º (78º)
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	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	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	54	54	63	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 - 25 kW
C1N or CLE Series	18 - 25 kW
C2N Series	36 - 50 kW
CNA or SNA Series	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

ΔT =	25º (14ºC)
GPM (L-Min) =	3 (11.3)
kW =	18 kW
Voltage & Phase =	240V 3-Phase
Heater Selected =	HL18

Example 2: Industrial Application

ΔT =	85º (47ºC)
GPM (L-Min) =	6 (22.7)
kW =	108 kW
Voltage & Phase =	480V 3Phase
Heater Selected =	CNA108

Example 3: Safety Shower Application

ΔT =	20º (11ºC)
GPM (L-Min) =	30 (113.4)
kW =	144 kW
Voltage & Phase =	600V 3-Phase
Heater Selected =	SNA144

HL Series
Commercial Water Heaters

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

Metric units are rounded
to the nearest whole unit.

Applications

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

Key Markets

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

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

NSF Certified to NSF/ANSI 372

Pb

ETL LISTED c US Intertek





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

Temperature Δ °F (°C)

Flow GPM	L-Min	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°)
0.15	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	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	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	-	-	-	-	-	-
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	-	-	-	-	-	-	-																	

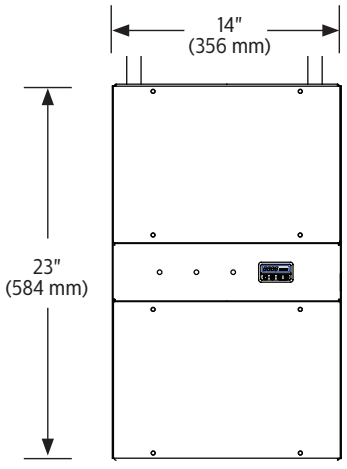
Sizing for the proper flow rate is important. If the temperature rise required is higher than shown, multiple HL units can be installed or a different series is available.

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

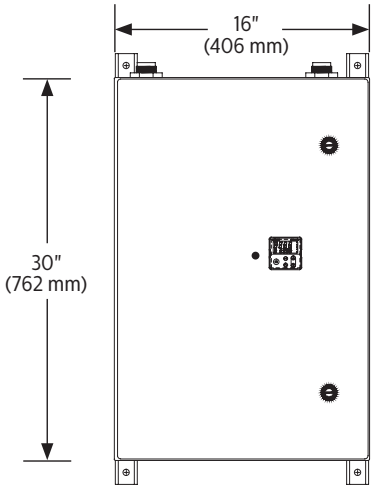
HL05 - 18 kW

Standard NEMA 1 enclosure



HL25 kW

Standard NEMA 4 enclosure



(mm)

Options may change dimensions.

Check technical data for additional dimensions.

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

Metric units are rounded to the nearest whole unit.

C1N & C2N SERIES
Light Industrial Heaters

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

Key Markets

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

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

Certified to NSF/ANSI 372

Intertek





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

Temperature Δ °F (°C)

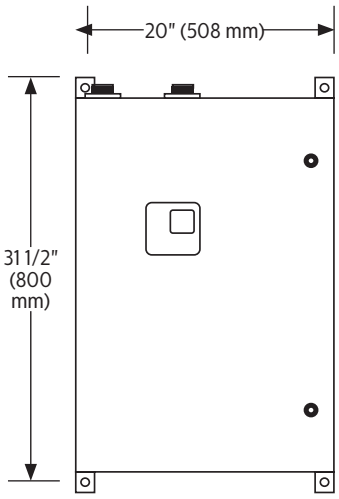
Flow GPM	L-Min	10° (6°)	15° (8°)	20° (11°)	25° (14°)	30° (17°)	35° (19°)	40° (22°)	45° (25°)	50° (28°)	55° (31°)	60° (33°)	65° (36°)	70° (39°)	75° (42°)	80° (44°)	85° (47°)	90° (50°)	95° (53°)	100° (56°)	105° (58°)	110° (61°)	115° (64°)	120° (67°)	125° (69°)	130° (72°)	135° (75°)	140° (78°)
0.75	2.8	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
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	36	36	36	36	36	36
2	7.6	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	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	-	-	-	-																		
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 series is available.

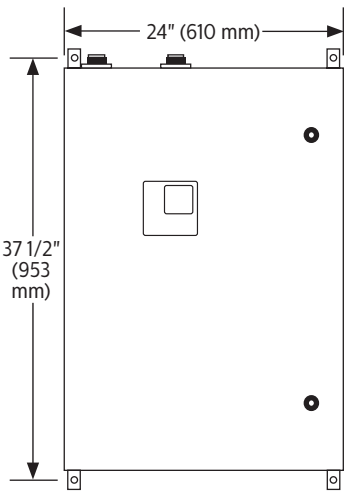
Pressure Drop

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

C1N 18 kW



C2N 50 kW



(mm)

Options may change dimensions.

Check technical data for additional dimensions.

kW Range
36 – 144 kW

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

Standard Voltages
480V, 600V 3-Phase Delta

Metric units are rounded to the nearest whole unit.

CNA SERIES
Large Industrial Heaters

Applications

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

Key Markets

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

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

NSF Certified to NSF/ANSI 372 · Pb · ETL Intertek · NB · ASME HLW

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

Temperature Δ °F (°C)

Flow GPM	L-Min	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°)
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
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	54	54	54	54
3	11.3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	54	54	54	54	54	54	54	54	63	63	63	63
4	15.1	36	36	36	36	36	36	36	36	36	36	36	54	54	54	54	54	54	54	63	63	72	72	72	108	108	108	108
5	18.9	36	36	36	36	36	36	36	36	54	54	54	54	54	54	63	63	72	72	108	108	108	108	108	108	108	108	108
6	22.7	36	36	36	36	36	36	36	54	54	54	54	63	63	72	72	108	108	108	108	108	108	108	108	126	126	126	126
7	26.5	36	36	36	36	36	36	54	54	54	63	63	72	72	108	108	108	108	108	108	108	126	126	126	144	144	144	144
8	30.2	36	36	36	36	36	54	54	54	63	72	72	108	108	108	108	108	108	126	126	126	144	144	144	-	-	-	-
9	34.0	36	36	36	36	54	54	54	63	72	108	108	108	108	108	108	126	126	126	144	144	-	-	-	-	-	-	-
10	37.8	36	36	36	54	54	54	63	72	108	108	108	108	108	126	126	126	144	144	-	-	-	-	-	-	-	-	-
12	45.4	36	36	36	54	54	63	72	108	108	108	108	126	126	144	144	-	-	-	-	-	-	-	-	-	-	-	-
15	56.7	36	36	54	63	72	108	108	108	126	126	144	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	75.6	36	54	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-											

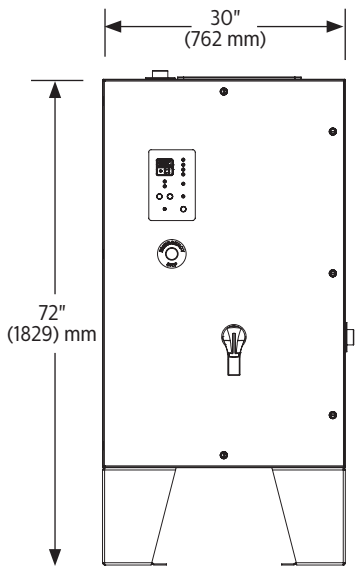
CNA Series 36-144 kW

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

CNA 126 kW



(mm)

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

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

CLE SERIES
Safety Eyewash Heaters

kW Range
18 – 25 kW

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

Standard Voltages
480V, 600V 3-Phase Delta

Metric units are rounded to the nearest whole unit.

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)

Key Markets

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

Certified to NSF/ANSI 372

Intertek

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

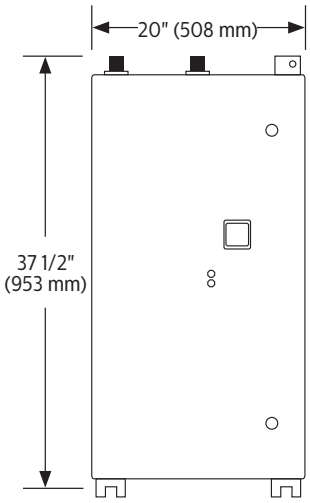
Temperature Δ °F (°C)

Flow GPM	L-Min	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
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	-	-	-	-	-	-
2	7.6	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	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

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	0.6

CLE 25 kW



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

kW Range
36 – 144 kW

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

Standard Voltages
480V, 600V 3-Phase Delta

Metric units are rounded to the nearest whole unit.

SNA SERIES
Safety Shower Heaters

Applications

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

Key Markets

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

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: Units 63kW and over are the only electric tankless water heaters registered with the National Board and certified with the HLW stamp

Certified to NSF/ANSI 372

Intertek

HLW





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

Temperature Δ °F (°C)

FLOW GPM	L-Min	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°)
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
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	54	54	54	54
3	11.3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	54	54	54	54	54	54	54	54	63	63	63	63
4	15.1	36	36	36	36	36	36	36	36	36	36	36	54	54	54	54	54	54	54	63	63	72	72	72	108	108	108	108
5	18.9	36	36	36	36	36	36	36	36	54	54	54	54	54	54	63	63	72	72	108	108	108	108	108	108	108	108	108
6	22.7	36	36	36	36	36	36	36	54	54	54	54	63	63	72	72	108	108	108	108	108	108	108	108	126	126	126	126
7	26.5	36	36	36	36	36	36	54	54	54	63	63	72	72	108	108	108	108	108	108	108	126	126	126	144	144	144	144
8	30.2	36	36	36	36	36	54	54	54	63	72	72	108	108	108	108	108	108	126	126	126	144	144	144	-	-	-	-
9	34.0	36	36	36	36	54	54	54	63	72	108	108	108	108	108	108	126	126	126	144	144	-	-	-	-	-	-	-
10	37.8	36	36	36	54	54	54	63	72	108	108	108	108	108	126	126	126	144	144	-	-	-	-	-	-	-	-	-
12	45.4	36	36	36	54	54	63	72	108	108	108	108	126	126	144	144	-	-	-	-	-	-	-	-	-	-	-	-
15	56.7	36	36	54	63	72	108	108	108	126	126	144	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	75.6	36	54	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-											

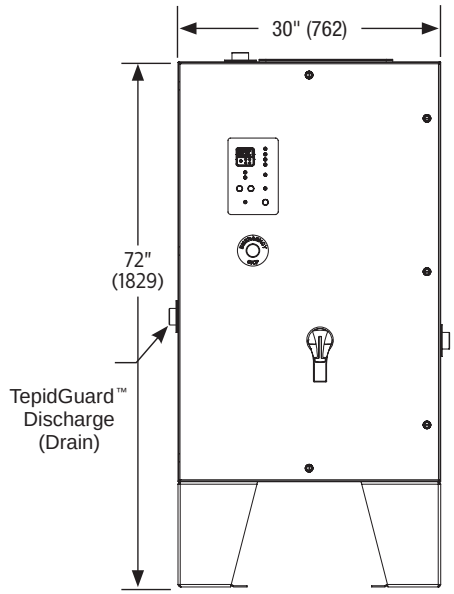
SNA Series 36-144 kW

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

SNA 126 kW



(mm)

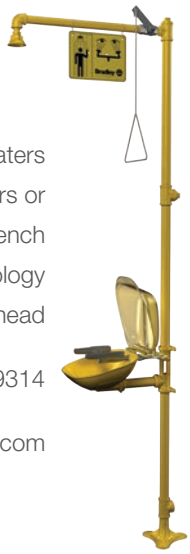
Options may change dimensions.

Check technical data
for additional dimensions.

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: S19314

See all models on bradleycorp.com



Design on demand Solutions
CNA & SNA Skid Series | S19361 & S19361F

Bradley Skid Systems

A complete solution in one compact and portable package.
Bradley 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 system 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
- Manufacturing environments
- Waste water treatment plants
- Process Heating
- Power plants
- Mining

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

Choose from the most popular Bradley emergency combination fixtures

S19314FW

S19314PDCFW

S19314FSS

S19314SC

S19314GG



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

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 for all technical specifications and additional information

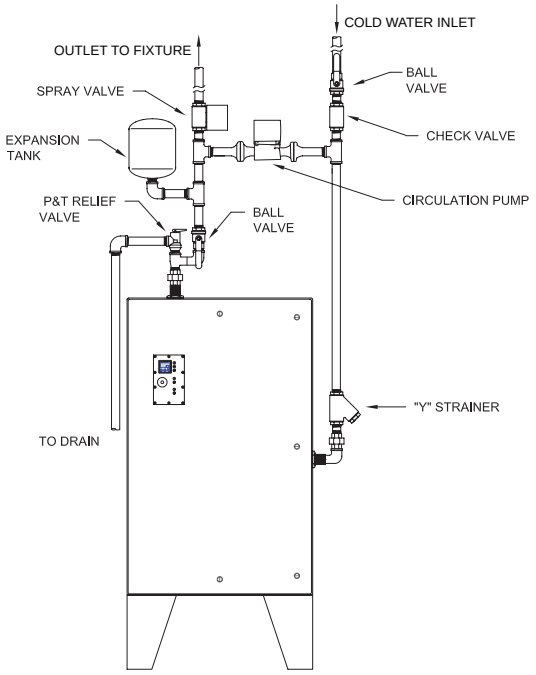
Design on Demand Solutions
Custom Applications

Design on Demand

Bradley's standard 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 Tankless Heaters ***Powered by Keltech™***.

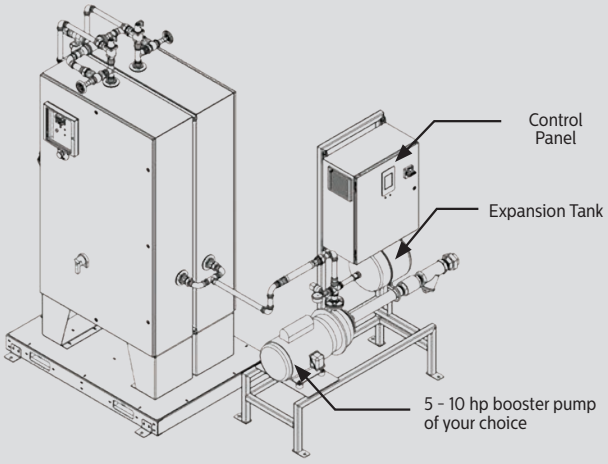
- When recirculation or a booster heater is needed, fully-modulating liquid-cooled heaters are the perfect solution.
- When the run is too long or pressure is too low, booster systems are pre-piped and ready; they can be installed in series or in parallel.
- Custom solutions available for your unique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

Contact Bradley's Industrial Team for a free design consultation at **designondemand@bradleycorp.com**
Visit **bradleycorp.com/design-on-demand** for more information

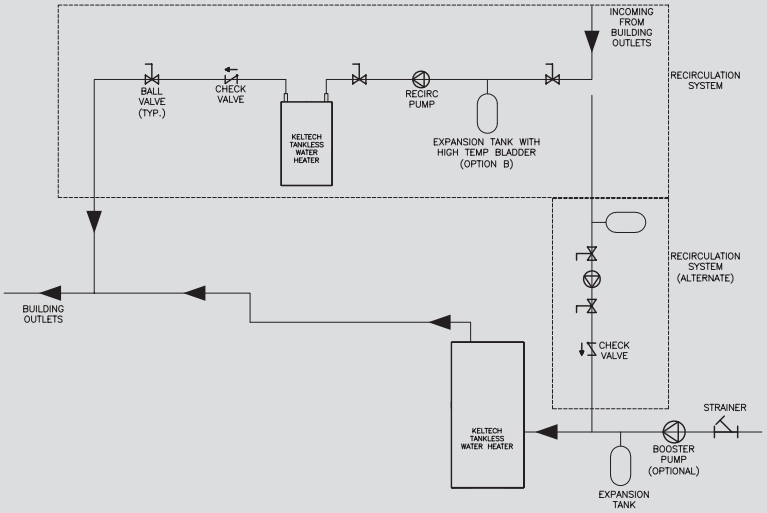


CNA 144 kW unit with integral recirculation
for ultra low flow and zero lag time.

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 Bradley heater used in a recirculation
system with or without booster heater.

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OF U.S. AND IMPORTED MATERIALS

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