

**KELTECH'S CLE SERIES
EMERGENCY EYEWASH HEATERS**

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KELTECH EMERGENCY EYEWASH HEATERS PROTECT AT RISK WORKERS

The CLE series emergency eyewash heaters are the perfect solution for workers at risk from chemical injury. Custom designed to meet your needs, Keltech emergency eyewash heaters perform when needed and quickly provide an unlimited supply of warm water. The CLE series heaters activate at .75 GPM and can handle water flow up to 10 GPM.

CLE series emergency eyewash heaters are built upon the proven technology found in Keltech's CN and CL series of industrial water heaters. All Keltech CLE series models meet the new ANSI Z358.1 standards for eyewash systems.

Keltech's water heating systems quickly reach the required ANSI standards for tepid water temperatures (60°F to 85°F) in as little as 20 to 30 seconds. With a Keltech tankless water heater, you will be able to provide injured employees with a consistent flow of tepid water, up to 10 gallons per minute for 15 minutes.



*Keltech's CLE
series emergency
eyewash heaters
are specifically
designed to meet
the new ANSI
standards.*



THE KELTECH CLE SERIES EMERGENCY EYEWASH HEATERS ARE:

- *Compact* – Emergency eyewash heaters do not require large floor space and can be wall mounted
- *Easy to Install* – Just add water and power. All you need is access to one electrical connection (480V or 600V) and a cold water line
- *Safe* – The CLE series includes redundant control and safety features
- *Wired to 480 or 600 Delta* – The CLE series does not require a neutral
- *Built to Last* – All Keltech tankless water heating solutions feature rugged industrial components including copper/brass construction for increased heat exchanger life
- *Energy Efficient* – Emergency eyewash heaters perform on-demand requiring power and water only when needed
- *Easy to Maintain* – Keltech's emergency eyewash heaters



The CLE series emergency eyewash heaters are built to last. All Keltech tankless water heating solutions feature rugged industrial components.

Keltech CLE series emergency eyewash heaters:

1. *Meet the New ANSI Z358.1 standards*

In a chemical injury emergency, time, temperature, and water flow are critical. Keltech's CLE series of tankless water heaters are designed exclusively for emergency eyewash systems. Keltech's water heating systems quickly reach the required ANSI standards for tepid water temperatures (60°F to 85°F) in as little as 20 to 30 seconds. With a Keltech tankless water heater, you will be able to provide injured employees with a consistent flow of tepid water, 10 gallons of water per minute for 15 minutes. Unlike tank based systems, Keltech heaters require no recovery time and can supply warm water indefinitely.

2. *Include Redundant Safety Features*

The safety of your employees is paramount. Keltech's CLE series includes multiple features guaranteed to ensure the safety of your employees. With features such as internal fusing, digital temperature control, Incoloy 800 sheathed heating elements and NEMA 4 water proof enclosures, the CLE will provide years of safe reliable service. The CLE series is ETL/ cETL approved and conforms to UL and CSA standards.

Perfect Temperature Range and Flow Rate

Keltech's control system is engineered to ensure that the water temperature is just right (60°F to 85°F) – not too hot and not too cold. If the water is too hot, some chemicals may react adversely and cause more injury. If the water is too cold, the injured employee may not stay in the shower long enough to safely remove the chemical. Because Keltech's water heaters are designed to perform on-demand, your employees can be assured that the flow and temperature of water will meet the ANSI standards.



Safety only circuits monitor for over temperature conditions and ensure individual chambers do not exceed ANSI standards.

Standard Features (continued)

No Excessive Temperature Issues

Every CLE series tankless water heater that Keltech engineers includes a separate set of circuits to monitor for “over temperature” conditions. Keltech’s limit controllers ensure that individual chambers will not exceed the ANSI standards for tepid water temperature.

3. *Reliable Performance and Minimal Maintenance*

The CLE series maintenance schedule falls within the normal ANSI requirements. The best feature of Keltech’s tankless water heating system is never having to open its enclosure door.

4. *Easy to Install*

Keltech’s CLE series of tankless water heaters can be mounted almost anywhere. Just add water and power. All you need is access to one electrical connection and a cold water line. Standard NEMA enclosures can be wall mounted in the vertical position. This flexibility allows the tankless safety showers and emergency eyewash systems to be mounted near your existing shower and/or eyewash facilities.

5. *Save Energy from Day One*

The Keltech CLE series safety shower and emergency eyewash systems perform on-demand. Because they are tankless, they only draw electricity and water when needed. Since there are no utilities to pay until the shower or eyewash is used, utility costs are minimized. There’s no need to keep a 300 gallon tank heated 24 hours a day, 365 days a year. There’s also no need for expensive re-circulation loops. That saves your organization money while still putting the safety of your employees and technicians first.



Every CLE series tankless water heater that Keltech custom designs includes a variable temperature control that adjusts power to maintain output set point.

Standard Features (continued)

6. *Minimal Pressure Drop*

Keltech's CLE series feature large internal passageways that minimize pressure drop.

7. *Incoloy Sheathed Element*

Provides longer element life and no "tingle effect" for eyewash users.

8. *NEMA 4 Enclosure Protection*

NEMA 4 enclosures are constructed for either indoor or outdoor use and provide a measure of protection for the emergency eyewash heater from the elements.

9. *Digital Temperature Control*

The PID LED controller visually displays the set point and actual temperature in a digital display format on the front panel. The splash proof front panel is standard. The controller is preprogrammed to your specifications and automatically adjusts to maintain precise output.



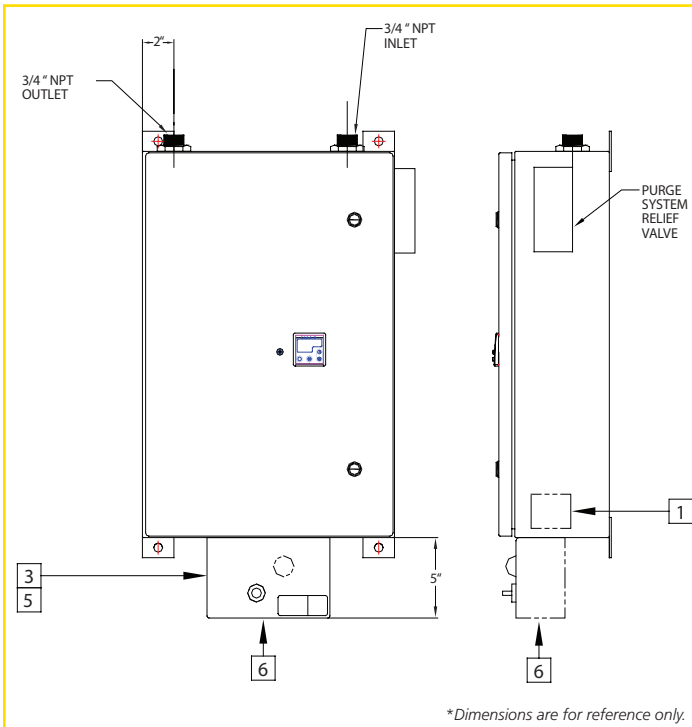
*Keltech CLE series
emergency eyewash
heater uses no
energy until
it's activated.*

EXPLOSION PROOF PURGE SYSTEM

Keltech safety shower and emergency eyewash systems can meet Explosion Proof requirements through the employment of a purge system. Electrical components installed in a NEMA 4 enclosure allow the system to be pressurized by clean instrument air or inert gas. This type of system conforms to Class 1, Division 2 hazardous area standards. Other class and division ratings may be available.

The purge process removes flammable gases and/or prevents the accumulation of ignitable dusts within the protected enclosure. The type of purge system determines the classification or division the enclosure will meet.

Heat, moisture, dust and corrosion are eliminated by providing the enclosure with a slow but continuous flow of inert gas or dry compressed air.



THE PURGE SYSTEM:

- Reduces heat build-up in the enclosure
- Inhibits metal corrosion and reduces moisture buildup
- Provides continuous monitoring capabilities
- Eliminates large, heavy explosion proof enclosures

A constant supply of inert gas or clean air will also be needed.

NOTES:

1. Suggested region for power entrance. Entrance hole to be provided by installer.
2. All plumbing fittings are 3/4" NPT female threaded.
3. Purge control panel Class 1 Division 2.
4. All installation egress from panel must be sealed (electrical conduit) for proper explosion proof installation.
5. Spark arrestor with calibration orifice is located behind the purge control unit and through the bottom of the enclosure.
6. Purge gas/compressed air inlet fitting here.

Optional Features (continued)

ACTIVATION ALARMS

For shower/eyewash stations in remote areas, the audible and/or visible alarm notifies key personnel that there has been a chemical spill or emergency situation.

GROUND FAULT

This safety feature detects electrical leakage from external sources to protect the equipment, electronics and the heat exchanger from being damaged in the event of a power fault.

FREEZE PROTECTION

Keltech's freeze protection option protects the heater and internal components in sub-zero conditions. It allows the unit to function at -23°F with an 11 mph wind.

INTERNAL FUSE DISCONNECT

Keltech has designed the CLE series to include internal fusing so there's no need to run a separate box.

NEMA 4X

NEMA 4X enclosures are constructed for either indoor or outdoor use and provide an additional level of protection against corrosion.

NEMA 4X enclosures protect:

- personnel against access to hazardous parts
- the equipment inside the enclosure against ingress of solid foreign objects (falling dirt and windblown dust)
- against the harmful effects on the equipment due to the ingress of water (rain, sleet, snow, splashing water, and hose directed water)
- against damage from the external formation of ice on the enclosure

COMMUNICATION CAPABILITIES

Communication is immediate between the activated emergency eyewash heater and the plant controller via automated circuit devices like a 4-20 mA transmitter, DeviceNet network control and a RS-485 converter.