

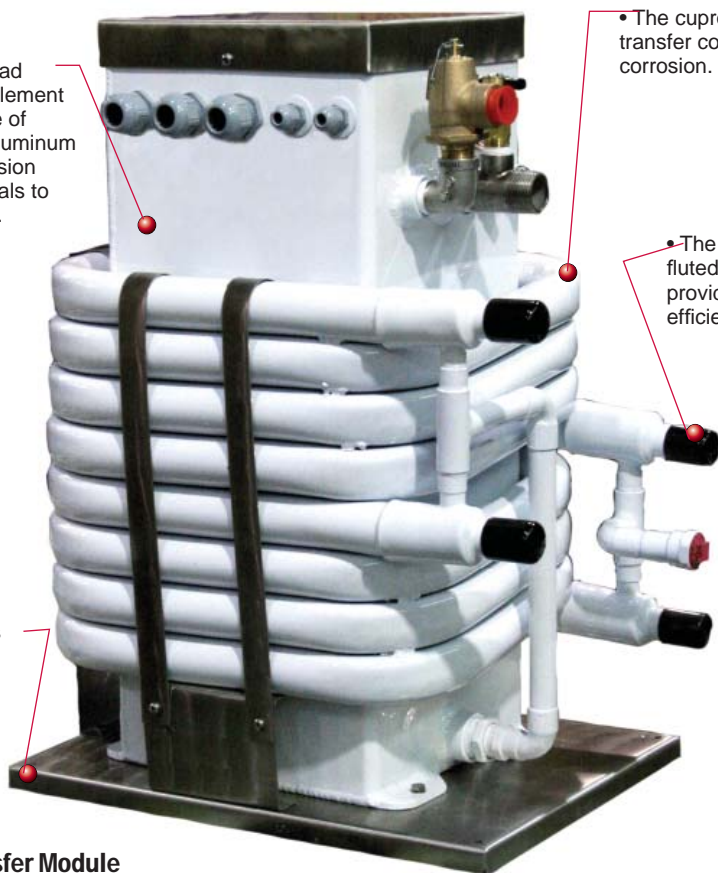
## Automatic Load Bank System

• The Linear Load Bank's heater element module is made of marine grade aluminum and other corrosion resistant materials to ensure long life.

• The cupronickel heat transfer coils resist corrosion.

• The single pass fluted coaxial coils provides maximum efficiency and even

• 316L stainless steel base.



Heat Transfer Module



PLC Control Panel  
(Optional on the Automatic Linear Load Banks)

• Fully programmable touch screen for optimal information streaming.

### MAKING THE BEST EVEN BETTER

On modern vessels, the increasing size of bow thrusters and popularity of zero-speed stabilizers are among the popular gear that requires special attention from your vessel's power management.

Combine these factors with multiple state-rooms and night-versus-day demands, and properly loading your generator set can be challenging. Without proper load management, the generator set can run underloaded, leading to costly and unnecessary maintenance issues.

To address these issues, Technicold offers its line of automatic load bank systems. Built by the marine experts at Technicold, and backed by the engineering expertise of Northern Lights, these load bank systems provide the peace of mind of proper generator loading in an industry renowned package.

By supplying a supplemental electrical load to the generator, Technicold load banks ensure that the set is always optimally loaded. The heat transfer module houses up to four banks of resistive water heating elements, which are submerged in a fresh water circuit. This heated fresh water is then pumped to a cupronickel coaxial fluted tube-in-tube heat exchanger for over board heat transfer.

The system's overall small footprint is at home in almost any engine room.

Protect your boat's most important assets; insist on Technicold by Northern Lights.

**TECHNICOLD**  
by **NORTHERN LIGHTS**

[www.technicold.com](http://www.technicold.com)

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## Technicold Automatic Linear Load Bank - Typical Installation and Usage

The Technicold Load Bank Controller monitors each leg of power from the ship's electrical panel and displays current kilowatt usage on an easy to read digital display or optional PLC screen (1).

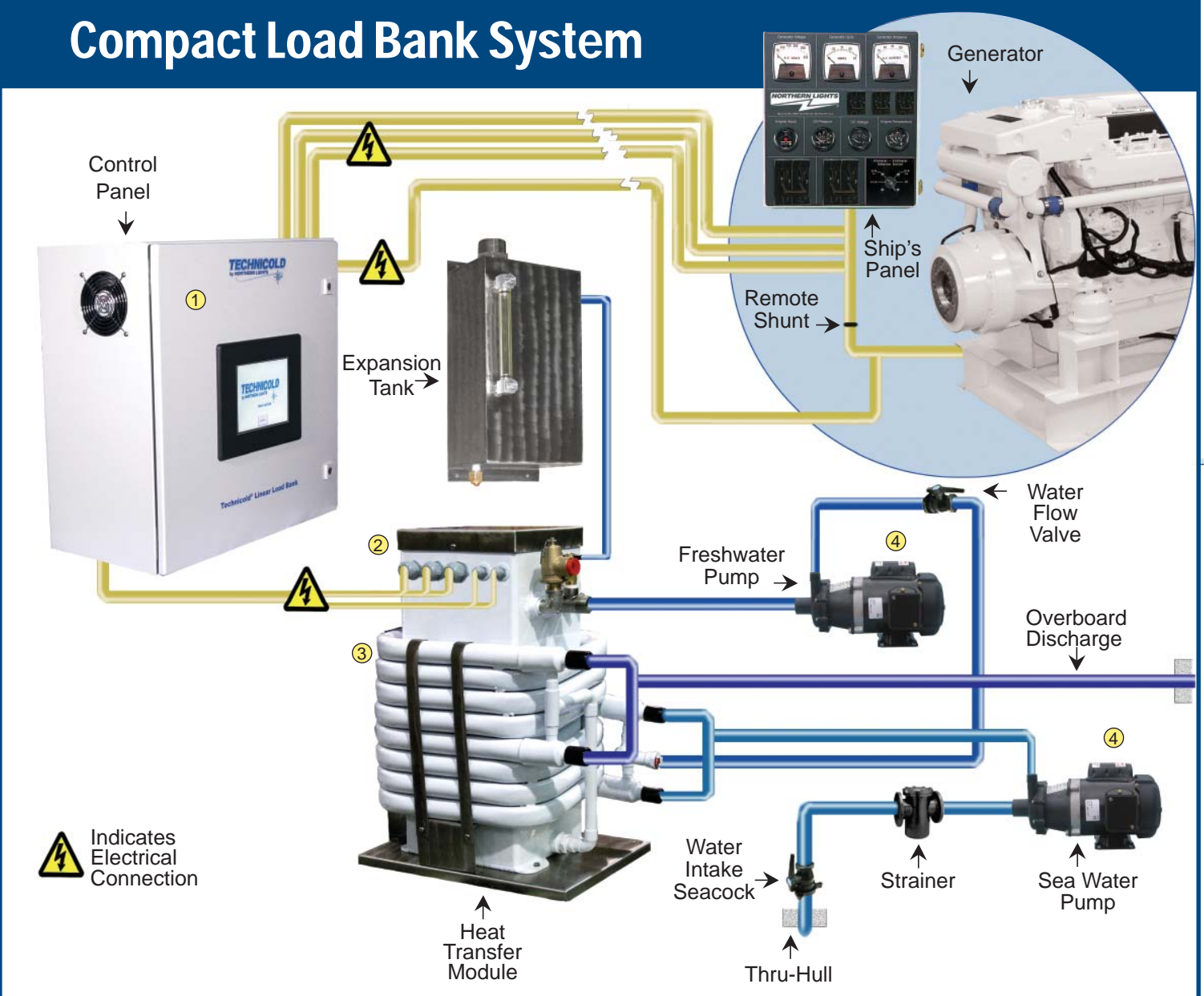
When the ship's power usage fluctuates, the controller uses pre-programmed parameters to add required electrical loads - including load shedding - as needed.

Variable outputs manage electrical load on each individual three phase leg, creating load balancing from less than 1kW up to 48kW. The load bank controller tracks each leg of power from the ship's electrical panel, creating an extremely versatile, precise load managing solution.

The heat transfer module houses up to four banks of resistive water heating elements, which are submerged in a fresh water circuit (2). This heated fresh water is then pumped to a cupronickel coaxial fluted tube-in-tube heat exchanger (3) for over board heat transfer.

Two seal-less magnetic driven pumps are used to circulate the fresh water as well as the seawater (4). This unique design does not require decalcification of heating elements, extending the life of heating elements and lowering overall maintenance costs.

## Compact Load Bank System

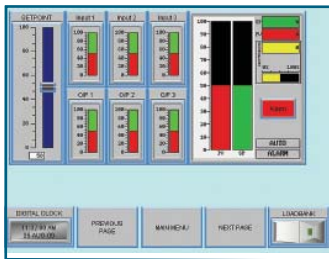


## PLC Touch Screens - Putting Your Load Maintenance at Your Fingertips

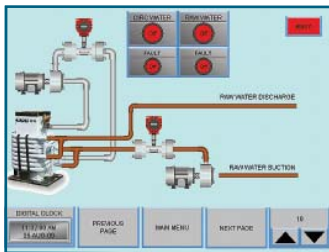
Your Technicold Automatic Load Bank can be easily programmed and monitored through our touch screen Programmable Load Controller (PLC) system.

The PLC System can be custom designed for virtually any information stream the owner requires.

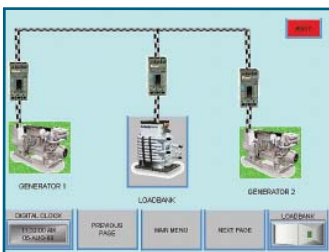
- Load parameters can be set and monitored.



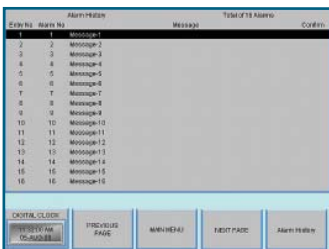
- Fresh and raw water flow can be easily viewed.



- Multiple generator sets can be viewed simultaneously.



- Programmable alarms can be set to ensure your power systems safety and efficiency.



Contact your factory representative for more options. Chances are if your system requires it, the PLC can show it.

## Technicold Automatic Load Bank - Standard Features

- Fresh water cooled heater element module.



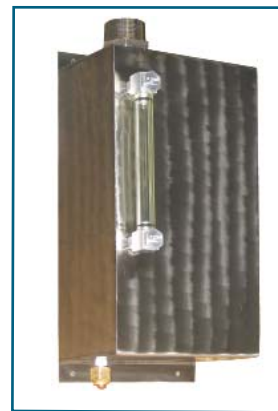
- Marine grade aluminum housing with stainless steel base.

- Cupronickel heat transfer coil. No zinc required.



- Two part polyurethane gloss white paint.

- Safety shutdowns:
  - High temperature in control cabinet.
  - High Temperature heater tank.
  - Water Flow.



- Heavy duty raw water and fresh water circulation pumps.
- Stainless steel expansion tank with sight glass.

- Load tested at factory.
- Operator's and installation manuals.

## Automatic Linear Load Bank with PLC Controller

In addition to standard features, Linear Load Banks offer:

- Standard control panel with digital heat controllers
- Linear load with 3 phase sensing and load management
- Variable loading from <1 to 48kW
- Optional PLC touch screen

### Standard Control Panel

Model No.	Voltage	Phase	Hz
LB48LDC	120/208	3	60
LB48LDE	220/380	3	50
LB48LDJ	230/400	3	50

### PLC Control Panel

Model No.	Voltage	Phase	Hz
LB48LPC	120/208	3	60
LB48LPE	220/380	3	50
LB48LPJ	230/400	3	50

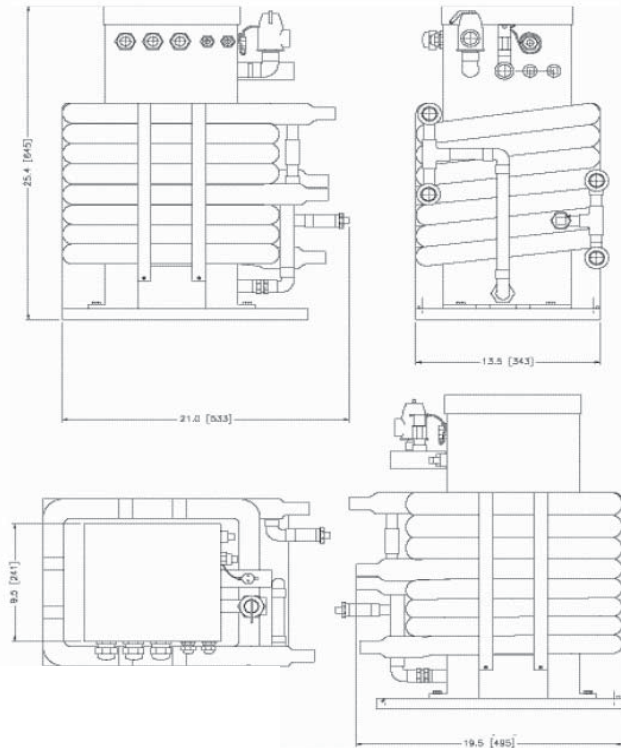
## Automatic Contactor Load Bank with Digital Controller

In addition to standard features, Contactor Load Banks offer:

- Standard control panel with digital heat controllers
- Digital load controller with 3 phase sensing and load management
- Variable step loading up to 48 kW.

Model No.	Voltage	Phase	Hz
LB48CDC	120/208	3	60
LB48CDE	220/380	3	50
LB48CDJ	230/400	3	50

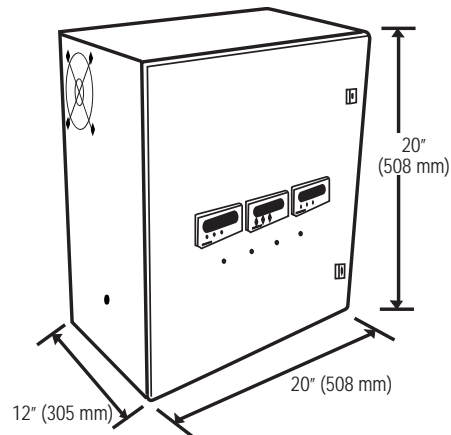
## Compact size to fit easily in Engine Room



Heater Assembly

Heater Assembly weight: 121 lb / 55 kg

## Standard Load Bank Panel



### TECHNICOLD

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