Reliable Electric Heating Solutions for Marine & Maritime Applications

Whether you are in the Arctic or the Caribbean, marine environments present some of the harshest conditions for mechanical and electronic systems. Salt-laden air, humidity, condensation, and freezing temperatures combine with constant motion and vibration to negatively impact the reliability of critical equipment. Whether operating offshore, in port, or on open water, marine systems require dependable thermal control to prevent moisture damage, ensure visibility, and support cold-weather operation. TUTCO Farnam delivers proven electric heating solutions engineered to overcome these unique challenges. Our heaters are trusted by shipbuilders, marine system integrators, and offshore operators to maintain safe, reliable equipment in the most demanding maritime conditions.

Condensation & Fogging in Instrumentation Panels

One common thermal issue in marine environments is the build-up of moisture inside instrumentation and control panels. When warm, moist air makes contact with cooler surfaces inside enclosures, condensation results—leading to fogged displays, corroded contacts, and even electrical failure. TUTCO Farnam's Axial Fan Heaters are a reliable solution to address this problem. Designed for compact spaces, our Axial Fan Heaters deliver consistent heat to maintain internal temperatures preventing fogging and moisture buildup. They are ideal for use inside navigation consoles, sealed electronic enclosures, and communications panels—protecting sensitive electronics and improving reliability in humid, salt-air conditions.

Visibility Issues from Fogged or Frozen Windows

Windows frequently fog up or freeze in marine environments—particularly during early mornings, in colder climates, or when warm interior air meets cooler glass. Obstructed visibility on the bridge, or other vital areas of the vessel, can be a safety hazard and an operational challenge. Our Crossflow Blower Heaters solve this issue by delivering a consistent curtain of warm air across window surfaces. These compact, quiet heaters are easily installed and are built to handle the vibration, salt exposure, and moisture of marine environments. Whether used in the pilot house or operator enclosures, they ensure navigational visibility is maintained.

Cold-Weather Startup Failures in Engines & Generators

In colder conditions, marine engines and onboard generators face two major issues: batteries that lose charge or struggle to deliver sufficient starting current, and engine oil that becomes too thick to flow properly. Both can result in failure to start—jeopardizing schedules and safety. TUTCO Farnam's Silicone Rubber Heaters are designed to keep these components at optimal operating temperatures. These rugged, flexible heaters are used in battery pads ensure batteries stay warm enough to deliver full power, and in oil filter heaters to keep oil at the right viscosity for

startup. Their adhesive backing, waterproof construction, and custom fit options make them perfect for tight engine bays and demanding marine environments.

Built for Marine Durability and Performance

Designed with corrosion-resistant materials, compact sizes, and flexible mounting options, TUTCO Farnam's solutions are built to handle salt spray, vibration, temperature extremes, and tight installation spaces. Whether upgrading a vessel, protecting sensitive electronics, or designing a new system, we provide OEMs, system integrators, and maintenance teams with custom engineering, rapid prototyping, and production-ready thermal designs that deliver reliable results in the harshest maritime environments.

Engineering service and support is a big part of what we do. Offered on an application by application basis. With over 2,000 unique heating element designs, chances are we have done something similar to your project.

Types of Electric Heaters for Maritime Applications

Axial Fan Heaters

Axial Fan Heaters are electric heating devices that feature a fan with blades typically measuring between 2.36 and 4.72 inches in diameter. These fans draw air in and push it across a heating element—most often a coil—warming

the air as it flows through. The air moves perpendicular to the motor axis, allowing for efficient heat transfer. These heaters are commonly used in applications such as space heating, dehumidification, and material curing.

Crossflow Blower Heaters

Engineered for maximum flexibility, TUTCO Farnam's Crossflow Blower Heaters come equipped with versatile mounting brackets that attach directly to the exhaust of a crossflow blower—removing the need for extra hardware. Additional mounting holes make it easy to use the heater as a stand-alone duct unit. Available options include single or dual wattage, as well as dual voltage configurations..

Silicone Rubber Heaters

In maritime environments, mechanical vibrations are common. Silicone rubber heaters are built to withstand these challenges—they resist vibrations, mechanical shocks, and repeated movements without issue. Silicone, in particular, is highly durable. It can flex repeatedly without stretching or tearing, making it a reliable and long-lasting solution for demanding maritime applications.

Let’s Talk About your Maritime Needs

Electric heating has become a critical design element in modern maritime systems—not just for comfort, but for safety, reliability, and performance. From fog-free instrumentation and clear visibility to reliable cold-weather starts and moisture control, precision electric heat is essential in ensuring marine equipment operates as intended in every condition. When specified early and engineered thoughtfully, TUTCO Farnam’s heating solutions help extend equipment life, reduce maintenance downtime, and meet the rigorous demands of marine compliance and environmental standards. Whether you're designing a next-generation vessel or retrofitting legacy systems, we’re ready to help you engineer dependable thermal solutions that keep your operations moving forward. Contact us to configure a system built for the sea.

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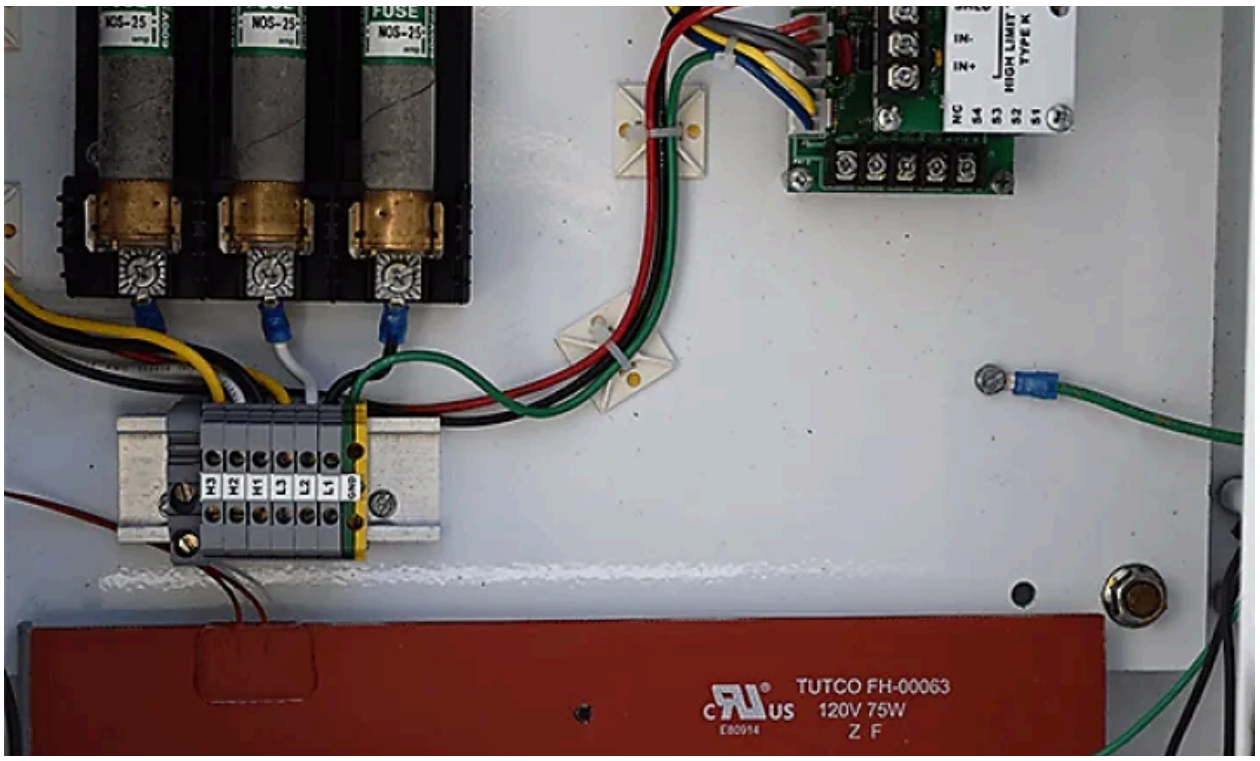

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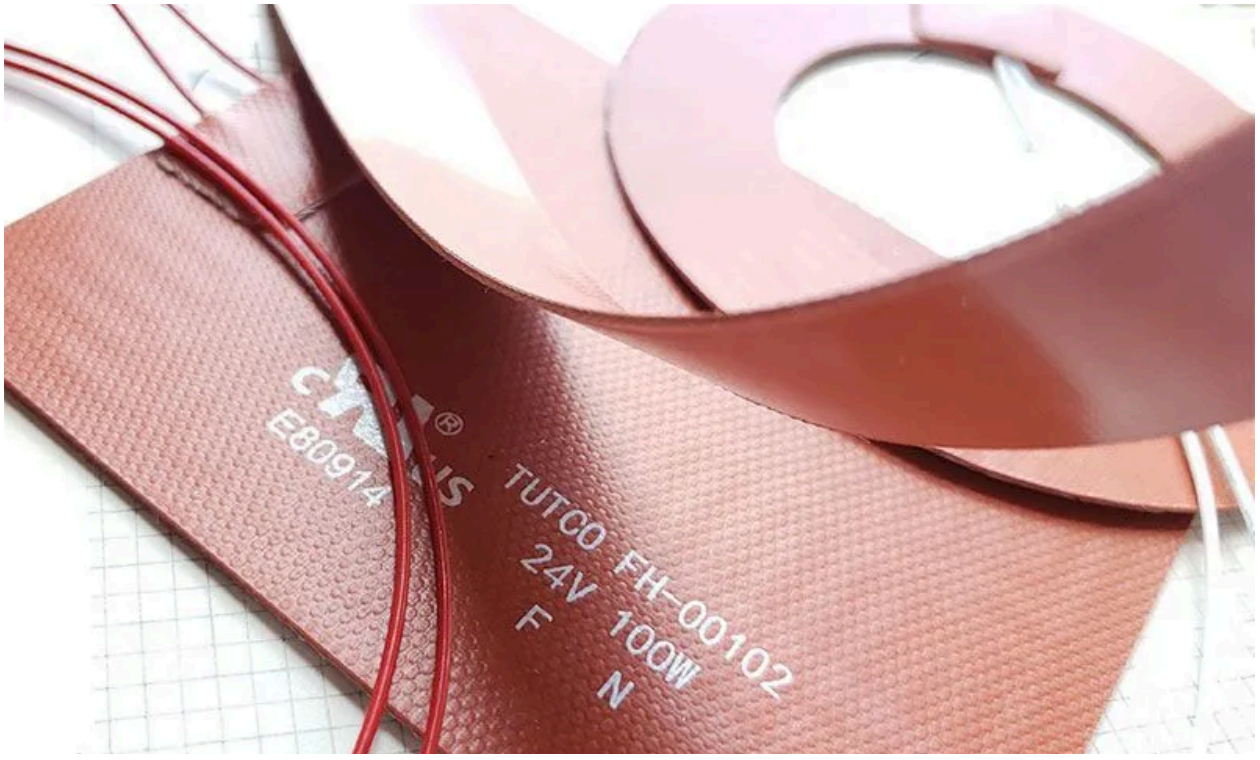

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