

# Sample Specification

## Marine Duct Heater Sample Specification

A specification to assure that the design and construction meet U.S. Coast Guard requirements can be prepared for electric duct heaters by copying the appropriate numbered sections below. A check box has been supplied so that you may mark those sections which you require. Material which is part of the basic specification has already been checked.

1. Supply electric duct heaters of the finned tubular type. All exposed metal frame and element surfaces and/or electrical enclosures shall be Type 304 stainless steel. Galvanized or aluminized coatings are acceptable only if applied after equipment is fabricated. The heaters shall be:
- For flange mounting to external duct flanges.
  - For slip-in mounting through side of duct.
2. Heaters shall be ABS approved, UL Listed to Standard 1996 and shall be in compliance with CFR Title 46 and all referenced Standards, including NEC, UL and IEEE-45. Heaters shall be manufactured by INDEECO.
3. Heaters shall be rated for the KW, voltage, phase and number of heating stages indicated in the schedule. Heaters shall be specifically designed for the airflow direction and terminal box overhang indicated in the schedule.
4. Heaters shall be furnished with the Control Option indicated below:
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> <b>Basic Option "G"</b><br>To include thermal cutouts, airflow switch, disconnecting magnetic contactors, fuses per NEC, fused and ungrounded control circuit transformer, and disconnect switch with mechanical door interlock. | <input type="checkbox"/> <b>Solid State Proportional Option "K"</b><br>To include thermal cutouts, airflow switch, solid state power controller/step controller, fuses per NEC, disconnect switch with mechanical door interlock and for heaters which exceed 277 volts, a fused and ungrounded control circuit transformer. | <b>The following shall be supplied with Option K:</b> <ul style="list-style-type: none"><li><input type="checkbox"/> Tamperproof room thermostat (standard).</li><li><input type="checkbox"/> Duct thermostat with remote setpoint adjuster.</li><li><input type="checkbox"/> PE Transducer.</li></ul> |
|---|--|--|
5. The following additional special construction features shall be supplied:
- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Watertight construction.   | <input type="checkbox"/> Insulated terminal box. | <input type="checkbox"/> Zero overhang terminal box. (Heater frame will be extended to match the terminal box width. Flanged heaters only). |
| <input type="checkbox"/> Captive nuts for mounting heaters to duct work. (Flanged heaters only) | <input type="checkbox"/> Bottom terminal box.    | <input type="checkbox"/> NEMA 3R construction.  |
6. The heaters shall be supplied with the following control circuit special features:
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Electronic step controller (Option G) Multistage heaters only. | <input type="checkbox"/> Pilot lights.                           | <input type="checkbox"/> Fan relay in place of airflow switch. |
| <input type="checkbox"/> All controls to be mounted in remote panelboard.               | <input type="checkbox"/> Delete transformer and contactors.      | <input type="checkbox"/> Delete transformer.                   |
|   | <input type="checkbox"/> Fusing for heaters rated under 48 amps. | <input type="checkbox"/> Pilot switch.                         |