



Certificate of Compliance

Certificate: 1407867

Master Contract: 187735

Project: 70087812

Date Issued: September 20, 2016

Issued to: Exheat Ltd.
Thrextton Road Industrial Estate
Watton Thetford
Norfolk, IP25 6NG
UNITED KINGDOM
Attention: James Pettman

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by:

A handwritten signature in blue ink, appearing to read 'Richard Simmons'.

Richard Simmons

PRODUCTS

CLASS 2878-02 HEATERS - Miscellaneous - For Hazardous Locations

CLASS 2878-82 HEATERS - Miscellaneous - For Hazardous Locations – Certified to US Standards

PART A:

Ex: Class I, Division 1, Groups A, B, C and D; Temperature Coded T1 – T6; Enclosure Type 4 or Type 4X (For SS304 Enclosures or better)

CAN: Ex d IIC; T1 – T6 Gb, IP66;

USA: Class I, Zone 1, AEx d IIC; T1 – T6 Gb, IP66;

Flange Type Electrical Immersion Heaters, Series Cat. Nos. FP..., FP...(A), or FP...(G), followed by 4, 6, 8, 10, 12, 14, 16, 18 or 20; Rated 600 V max, 1 or 3 phase, 600 kW max. 80 W/in² max. Ambient Rated -50°C to +60°C.



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Notes:

1. The certification is conditional on the provision of a process or flow control and/or temperature limiting control and/or pressure control by the installer and/or user, which will de-energize the heater in the event of process system malfunction.
2. The device with the lowest hazardous location rating governs the overall hazardous location designation.
3. The installer and user must ensure that the terminal enclosure and its stand-off are not lagged. (Thermally insulated).
4. This Certification is conditional on the provision of a process or flow control and/or Temperature Limiting &/or Pressure Control which will de-energize the heater in the event of system malfunction

PART B:

CAN: Ex d IIC; T1 – T6 Gb, IP66;

USA: Class I, Zone 1, AEx d IIC; T1 – T6 Gb, IP66:

Flange Type Electrical Immersion Heaters, Series Cat. Nos. FP..., FP...(A) or FP...(G), followed by 4, 6, 8, 10, 12, 14, 16, 18, 20 or 24; Rated 600 V max, 1 or 3 phase, 600 kW max. 80 W/in² max. Ambient Rated -60°C to + 60°C.

Notes:

1. The certification is conditional on the provision of a process or flow control and/or temperature limiting control and/or pressure control by the installer and/or user, which will de-energize the heater in the event of process system malfunction.
2. The device with the lowest hazardous location rating governs the overall hazardous location designation.
3. The installer and user must ensure that the terminal enclosure and its stand-off are not lagged. (Thermally insulated).
4. This Certification is conditional on the provision of a process or flow control and/or Temperature Limiting and/or Pressure Control which will de-energize the heater in the event of system malfunction.
5. For installations with metal rigid conduit, a seal shall be installed within 50 mm of conduit/cable entry.



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APPLICABLE REQUIREMENTS

CSA Standard C22.2 No 0-2010	General Requirements - Canadian Electrical Code, Part II
CSA Standard C22.2 No 25-1966	Enclosures for Use in Class II Groups E, F and G Hazardous Locations
CSA Standard C22.2 No 30-1986	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA C22.2 No. 72-M1984	Heater Elements
CAN/CSA C22.2 No 94-M91	Special Purpose Enclosures – Industrial Products
CAN/CSA C22.2 No 60079-0: 11	Electrical Apparatus for Explosive Gas Atmospheres- Part 0: General Requirements
CAN/CSA C22.2 No 60079-1: 11	Electrical Apparatus for Explosive Gas Atmospheres- Part 1:Flameproof enclosures “d”
T.I.L. No E-11	Enclosures of Welded Construction for Class I, Div 1, Hazardous Locations
UL Standard 50, Ed. 12	Enclosures for Electrical Equipment
UL Standard 823, Ed. 9	Electric Heaters for Use in Hazardous (Classified) Locations
ANSI/UL 60079-0, Ed. 5	Electrical Apparatus for Explosive Gas Atmospheres- Part 0: General Requirements
ANSI/UL 60079-1, Ed. 6	Electrical Apparatus for Explosive Gas Atmospheres- Part 1: Flameproof enclosures “d”



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MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Nameplate adhesive label material approval information:

Permanently marked on a metal nameplate(s) having a thickness of 1mm (S.S.), secured to the heater enclosure by screws or drive pins engaging bottomed holes:

PART A: (Division and Zones)

- Manufacturer's name or trademark;
- Manufacturer's type identification;
- Temperature Coded T1 (450 °C), T2 (300°C), or T3 (200°C), or T4 (135°C) or T5 (100°C) or T6 (85°C)
- Serial number or date Code;
- CSA Monogram, with the C US indicator;
- Complete electrical ratings.
- "CAUTION: OPEN CIRCUIT BEFORE REMOVING COVER"
AND
"ATTENTION: OUVRIR LE CIRCUIT AVANT D'ENLEVER LE COUVERCLE."
- "CAUTION: THIS CERTIFICATION IS CONDITIONAL ON THE PROVISION OF A LIQUID LEVEL AND/OR TEMPERATURE LIMITING CONTROL AND/OR PRESSURE CONTROL WHICH WILL DE-ENERGIZE THE HEATER IN THE EVENT OF SYSTEM MALFUNCTION." AND
"ATTENTION: CETTE CERTIFICATION DÉPEND DE L'UTILISATION D'UN CONTRÔLE DE LA LIMITIE DE TEMPÉRATURE ET/OU D'UN CONTRÔLE DE LA PRESSION ET/OU D'UN NIVEAU LIQUIDE QUI POURRONT COUPER L'ALIMENTATION DU RÉCHAUFFEUR DANS LE CAS D'UN DYSFONCTIONNEMENT DU SYSTÈME."
- "SUPPLY WIRE SHALL BE SUITABLE FOR AT LEAST 90°C"
AND
"LE CÂBLE D'ALIMENTATION DOIT SUPPORTER AU MOINS 90°C."
- Ex d IIC Gb and AEx d IIC Gb;
- Certificate Number 1407867X
- Hazardous Location Designation:
 - Class I, Division 1, Groups A, B, C and D;
 - Class I, Zone 1
- Ambient range -50°C to +60°C;



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- “CAUTION: If metal rigid conduit is used, a seal shall be installed within 50 mm of conduit/cable entry. If glands are used, these must be of the certified barrier type. This enclosure contains live circuits. Ensure that all circuits are de-energized prior to removing cover.”
AND
“ATTENTION: Si vous utilisez un conduit en métal rigide, il faut installer un joint pour les 50 premiers mm du conduit/de l'entrée du câble. Si vous utilisez des serre-câbles, ils doivent correspondre au type de barrière certifiée.”
- **WARNING:** Anti-Condensation Heater Fitted _____ Volts, _____Watts. This Enclosure contains live circuits. Ensure that all circuits are de-energized prior to removing cover.(When applicable)
AND
“AVERTISSEMENT: Ce boîtier contient des circuits activés. Assurez-vous que tous les circuits sont hors tension avant de retirer le couvercle.”
- Enclosure Type 4 designations, or Type 4X where the material is Stainless Steel Type 304 or better
- M16 X 2 socket head cap screws shall be torque to 241 lb.ft

PART B: (Zones only)

The marking for equipment in Part B is identical to the marking in Part A with the following exceptions:

- Ambient range -60°C to +60°C;
- “WARNING: A SEAL SHALL BE INSTALLED WITHIN 50 mm OF THE ENCLOSURE”
AND
“AVERTISSEMENT: UN SCÉLLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50 mm DU BOÎTIER.”
- The Hazardous Location Designation for “Class I, Division 1, Groups A, B, C and D” shall not be used and does not apply to equipment that has an ambient range of -60°C to +60°C.