



THORNE &
DERRICK
INTERNATIONAL

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Installation, Operation & Maintenance Instructions



InteliHeat Heating Jacket

Type: 210L D

Power: 550 W/m²


NON SEALED VERSION



CERTIFICATE NO: 074044

CD041-8 28/07/15



Certification Nos. Sira07ATEX3293X IECEx Sir07.0101X  II 2 G Ex e II T3
Certified to IEC Standards 60079-0, 60079-7. For use in Zones 1 and 2.



CE 0518

Certification

The IntelliHeat Heating Jacket is designed to be used with drums up to size 45g imperial/ 55g US/ 210L. It should be secured around the container and used to heat its contents. The jacket is manufactured from a heating element surrounded by glass cloth coated with silicone or a similar rubber compound. Insulation is used to retain heat. The device should not remain energised when not secured around the container.

This IntelliHeat Heating Jacket is certified for use at voltages up to 240v. It has been given the following rating:



II 2 G Ex e II T3

THIS INTELIHEAT HEATING JACKET IS A NON SEALED VERSION. IT IS CERTIFIED FOR USE IN HAZARDOUS GAS AREAS ONLY. For hazardous dust areas, contact manufacturer

The IntelliHeat Heating Jacket may be used in zones 1 and 2

IP44

The heating jacket may be run up to the voltages in the table below when around a 45g imperial/ 55 US/ 210L metal drums.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240v	-20 to 40C	T3 150C
Up to 230v	-20 to 30C	T4 135C
Up to 195v	-20 to 40C	T4 135C
Up to 120v	-20 to 40C	T5 100C
Up to 95v	-20 to 40C	T6 85C

The IntelliHeat Heating Jacket may also be used with a flexible insulated lid around 210L metal drums.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240v	-20 to 30C	T3 150C

The IntelliHeat Heating Jacket may also be used to heat up 210L plastic drums

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240v	-20 to 30C	T3 150C
Up to 230v	-20 to 40C	T3 150C
Up to 190v	-20 to 40C	T4 135C
Up to 118v	-20 to 40C	T5 100C
Up to 95v	-20 to 40C	T6 85C

Supply

Single Phase 240volts maximum, 50/60Hz AC, 3A, 720W nominal

The jacket is a double insulated product and does not require an earth

Operation

Heating Jackets are designed for use in industrial areas and should only be installed by a competent person.

The IntelliHeat Heating Jacket is fitted with a supply cable, ensure this is terminated in a suitably certified enclosure or safe area. The cable should be installed to prevent pulling or twisting. The jacket must be connected in series with an RCD. (Not applicable for IT supplies)

Do not connect to the supply until the jacket is correctly positioned. Always disconnect before removal. **FAILURE TO DISCONNECT PRIOR TO REMOVAL MAY RESULT IN OVERHEATING AND DAMAGE TO THE JACKET.**

■

Warning:

Ensure that the jacket is only energised when around a suitable container

Wrap the jacket around the container to be heated and adjust the retaining straps until a close fit is obtained without over-tensioning the jacket.
The jacket should be fully spread and not compressed by any obstructions.

The jacket contains a self limiting heating membrane which will maintain a constant temperature on the surface of the jacket. See table below:

Nominal voltage	Ambient temperature	Approximate temperature of jacket when around a steel drum (measured at inner surface)
240v	20C	80C
110v	20C	40C

CHECK WITH THE SUPPLIERS OF THE CONTAINER AND ITS CONTENTS THAT IT IS SAFE TO HEAT TO THE SET TEMPERATURE.

When using the heater on a material for the first time it is recommended to monitor the heating performance. Note: Temperature of the material within the container will usually be lower than the jacket wall temperature.

During and after heating, care should be taken when handling the jacket heater and container.

Ensure that the container is vented to prevent internal pressure build up.

THE HEATING JACKETS SHOULD NOT BE USED IN CONJUNCTION WITH ANY OTHER HEATING APPLIANCE. NO ADDITIONAL INSULATION OR COVERS SHOULD BE USED.

The IntelliHeat Heating Jacket is designed to be used in sheltered areas

The Jacket should be installed so it is protected from mechanical damage.

The Jacket should only be used in indoor locations

The IntelliHeat Heating Jacket is manufactured from a silicone or similar rubber compound coated glass fibre cloth with a PVC insulated supply cable. The heating jacket is not suitable for use in applications where it may be subjected to aggressive chemicals.

Storage

The jacket must be stored horizontally when not fitted around a drum (this may be folded or laying flat)

Safety

Ensure the heating jacket is not operated when folded

Maintenance

BEFORE EACH USE, CHECK THE OVERALL FABRIC OF THE HEATING JACKET, THE STITCHING, CABLE GLAND AND SUPPLY CABLE, TO ENSURE THEY ARE FREE FROM ANY DAMAGE. CONTACT MANUFACTURER IF ANY DAMAGE IS FOUND.



sira
CERTIFICATION

1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 07ATEX3293X** Issue: **2**

4 Equipment: **InteliHeat Heating Jacket**

5 Applicant: **LMK Thermosafe Limited**

6 Address: 9-10 Moonhall Business Park
Helions Bumpstead Road
Haverhill
Suffolk
CB9 7AA
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006 EN 60079-7:2007 EN 61241-0:2006 EN 61241-1:2004

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

Non sealed version



II 2 G
Ex e II T* (Ta = -20°C to + **°C)

Sealed version



II 2 G D
Ex e II T* (Ta = -20°C to + **°C)
Ex tD A21 IP64 (T**°C)

*The ambient range, dust marking and T class are subject to the configuration of equipment and input voltages. The heating jacket should not be used with any other heating appliance (See description).

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Project Number 27230
C. Index 06

This certificate and its schedules may only be reproduced in its entirety and without change.

D R Stubbings BA MIET
Certification Manager

Form 9400 Issue 1

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3293X
Issue 2

DESCRIPTION OF EQUIPMENT

The IntelliHeat Heating Jacket, available either non-sealed or sealed, is designed for use with Intermediate Bulk Containers (IBC) and 210L drums and is secured around the containers to heat the contents.

The jacket is manufactured from a carbon loaded heating membrane. The heating membrane is surrounded by fabric and has a further insulated layer to retain heat. An internal insulated supply cable is permanently connected to the heating membrane via a suitably certified cable gland. The cable gland entry passes through the outer jacket material and incorporates a support strip. The connections to the heating membrane are via butt crimped connections. The supply cable is to be terminated in a suitably certified enclosure or in a safe area.

The heating jacket (IH/D/****) may have the a.c. voltages applied in the table below when around a 45 gal imperial or 55 gal US/210 L metal drum.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240 V	Ta = -20°C to +40°C	T3 (T150°C)
Up to 230 V	Ta = -20°C to +30°C	T4 (T135°C)
Up to 195.5 V	Ta = -20°C to +40°C	T4 (T135°C)
Up to 120.9 V	Ta = -20°C to +40°C	T5 (T100°C)
Up to 95.5 V	Ta = -20°C to +40°C	T6 (T85°C)

The heating jacket (IH/D/****) may also be used with a LMK flexible insulated lid.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240 V	Ta = -20°C to +30°C	T3 (T150°C)

The heating jacket (IH/D/****) may also be used to heat up plastic 200 L drums.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240 V	Ta = -20°C to +30°C	T3 (T150°C)
Up to 230 V	Ta = -20°C to +40°C	T3 (T150°C)
Up to 190.9 V	Ta = -20°C to +40°C	T4 (T135°C)
Up to 118.2 V	Ta = -20°C to +40°C	T5 (T100°C)
Up to 95.5 V	Ta = -20°C to +40°C	T6 (T85°C)

The heating jacket (IH/IBC/****) may be used to heat up Intermediate Bulk Containers. The heating jacket may also be used with a LMK insulated lid.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240 V	Ta = -20°C to +40°C	T3 (T150°C)
Up to 230 V	Ta = -20°C to +35°C	T4 (T135°C)
Up to 131.8 V	Ta = -20°C to +40°C	T5 (T100°C)
Up to 100 V	Ta = -20°C to +40°C	T6 (T85°C)

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3293X
Issue 2

The heating jacket (IH/IBC/****) may also be used to heat up four 45 gal imperial/55 gal US/210L metal or four 200 L plastic drums on a pallet. The heating jacket may also be used with a LMK insulated lid.

Nominal Voltage	Ambient temperature range	Certified temperature rating
Up to 240 V	Ta = -20°C to +40°C	T3 (T150°C)
Up to 240 V	Ta = -20°C to +28°C	T4 (T135°C)
Up to 235 V	Ta = -20°C to +30°C	T4 (T135°C)
Up to 200 V	Ta = -20°C to +40°C	T4 (T135°C)
Up to 130 V	Ta = -20°C to +40°C	T5 (T100°C)
Up to 90.9 V	Ta = -20°C to +40°C	T6 (T85°C)

Variation 1 - This variation introduced the following change:

- A change in the applicants address from Falconer Road Haverhill to Hellions Bumpstead Road Haverhill.

Variation 2 - This variation introduced the following change:

- The removal of a special condition of safe use.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	11 December 2007	R1A17305A	The release of the prime certificate.
1	6 October 2009	R20675A	The introduction of Variation 1.
2	21 February 2012	R27230A/00	The introduction of Variation 2.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1 The IntelliHeat Heating Jacket is supplied with an attached supply cable, therefore, the equipment shall be installed such that this supply cable is protected from mechanical damage and it shall not be subjected to tension or torque. If this cable is to be terminated within an explosive atmosphere, then the free end of the cable shall be provided with suitably certified protection that is appropriate for the application.
- 15.2 The IntelliHeat Heating Jacket does not have a rigid outer enclosure; therefore, the equipment shall be installed and used such that it is protected from mechanical damage.
- 15.3 The IntelliHeat Heating jacket shall only be used in indoor locations (non sealed version only).
- 15.4 The device shall not remain energised when not secured in position around the container.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 07ATEX3293X
Issue 2

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 An electrical strength test of 1500 V rms shall be applied for at least 60 s on the membrane, as required by clause 7.1 of EN 60079-7:2007.

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EC Declaration of conformity

The following products are in compliance with the EC directives listed below:

Products:

InteliHeat Heating Jacket

EC Directives:

Equipment for use in Potentially Explosive Atmospheres 2014/34/EU



II 2 G Ex e II T3, T4, T5, T6 (ambient -20 deg C to +28, 30, 35 or 40 deg C)

Standards: EN 60079-0:2004, EN 60079-7:2003

EC-Type Examination Certificate Number: Sira 07ATEX3293X

Certifications held by Sira Certification Ltd, Rake Lane, Eccleston, Chester, CH4 9JN

Ex Notified Body Number: 0518

Electromagnetic Compatibility (EMC) 2004/108/EC

Complies with the relevant parts of: EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61000-3-11:2001, EN 61000-6-3:2007 + A1:2011

Restriction of Hazardous Substances 2011/65/EU

The Products listed above have also been tested and issued with an IECEx Certificate of Conformity.

Issued by Sira Certification Ltd. IECEx SIR 07.0101X

This certificate may be viewed on the Official IECEx Website – WWW.IECEx.COM

Mark Newton
General Manager / Director

Additional related equipment available (certified for hazardous areas)

Inteliheat IBC heating jacket



Thermosafe Type A



Thermosafe Type B



Thermosafe Lifting Frame



Faratherm Base Heater

