



EU Type Examination Certificate CML 18ATEX9374X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Turbolite Compressed Air Powered Luminaire Types A-TL44A, A-TL44B, A-TL45A and A-TL45B**
- 3 Manufacturer **Wolf Safety Lamp Company**
- 4 Address **Saxon Road Works,
Sheffield, S8 0YA,
United Kingdom**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V. , Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.


9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN 1127-1:2011

10 The equipment shall be marked with the following:

 I M 2

Ta= -20°C to +55°C

 II 2 G D

II T4

II T135°C

Ta= -20°C to +55°C



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11 Description

The Turbolite Luminaire is fitted with a 250W lamp and is powered by a compressed air driven integral turbine generator at 4 to 8 bar. The luminaire may be manufactured from brass or aluminium with either a reflector head assembly Type 45 or a bay light assembly Type 44. The air outlet is fitted with a particle trap that vents onto the hazardous area. When the particle trap is replaced with additional hose fitted to the air outlet to take air to a safe area, this permits the luminaire to be used where there is a hazard from dust or fibres. The enclosure has blind threaded holes that provide mounting facilities. A bridle assembly may be fixed to these holes to permit the luminaire to be mounted on a hook.

The luminaire is connected to the air supply via suitable anti-static hose. The air inlet to the equipment includes an air regulator that is capable of adjustment using special tools. Adjustment of the regulator to achieve the correct lamp output is carried out in the safe area according to manufacturer's instructions.

The air supply is fed through the enclosure to the reflector head or bay light assembly, then back to the generator housing to power the turbine generator. The generator comprises a rotor fitted with permanent magnets, turbine wheel and ball bearings that runs inside a wound stator. The air is directed on to the turbine wheel and then exits the enclosure through the turbine housing cover via a particle trap or hose depending on the type reference. The housing cover is fixed in position by a machined spigot joint and three cap head screws.

The stator winding leads are connected to insulated connection studs with crimped cable lugs. The studs pass through the wall of the enclosure and further leads from the lamp holder are fitted to them with crimped cable lugs. The lamp holder is fixed to the turbine enclosure with screws and is able to accept M36 or M33 type lamps rated at 250W, 24V.

The reflector head assembly comprises a conical housing with a toughened glass lens retained by a lens ring and high tensile strength cap head screws. A moulded gasket is used to seal the lens retained by a lens ring and high tensile strength cap head screws. A moulded gasket is used to seal the lens in the reflector head. A reflector is fitted inside the housing and this is also retained by the lens ring. The reflector head is fitted to the generator housing by a screw thread and an O-ring is used to seal the joint.

The bay light assembly comprises a ball glass fitted with a sealing gasket that fits into a recess in the generator housing. A metal washer is fitted over the gasket and a polycarbonate guard with integral lock screw ring is screwed on to the generator housing to provide clamping pressure. The lock screw ring has a number of holes to prevent the guard becoming pressurised in the event of a seal or ball glass failure.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	27 Feb 2019	R12067B/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.



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13 Conditions of manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. This equipment shall only be supplied with air from a clean, dry source that is free from contamination with hazardous gas, dust or fibres.
- ii. When this equipment is used in the presence of combustible dust, the air outlet shall be fitted with additional hose so that it is piped to a safe area instead of venting into the hazardous area.
- iii. The hoses that are fitted to this equipment shall be anti-static with a resistance between $10^4 \Omega$ and $10^8 \Omega$.



Certificate Annex

Certificate Number CML 18ATEX9374X
Equipment Turbolite Compressed Air Powered Luminaire Types A-TL44A, A-TL44B, A-TL45A and A-TL45B
Manufacturer The Wolf Safety Lamp Company Ltd

The following documents describe the equipment or component defined in this certificate:

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Drawing No	Sheets	Rev	Approved date	Title
A4-701	1 to 3	4	27 Feb 2019	Wolf Turbolite Lamp (ATEX)
A4-801	1 to 3	6	27 Feb 2019	Wolf Turbolite Generator (ATEX)
A4-901	1 of 1	3	27 Feb 2019	Stator Assembly (ATEX)
A4-902	1 of 1	3	27 Feb 2019	Bulbholder Assembly (ATEX)
A4-903	1 of 1	4	27 Feb 2019	Turbolite Approval Label (ATEX)