



## EC-TYPE EXAMINATION CERTIFICATE

Equipment or Protective System Intended for use  
in Potentially Explosive Atmospheres  
Directive 94/9/EC

EC-Type Examination Certificate Number : **BAS02ATEX2220X**

Equipment or Protective System: **WOLF TORCH TS-2X / TR-2X**

Manufacturer: **THE WOLF SAFETY LAMP CO LTD**

Address: **Saxon Road Works, Sheffield, S8 0YA**

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

The Electrical Equipment Certification Service, notified body number 600 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report N°


**02(C)0011 dated 9 August 2002**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014: 1997 + Amds 1 & 2 EN 50019: 2000 EN 50020: 2002 EN 50281-1-1: 1998**  
except in respect of those requirements listed at item 18 of the Schedule.

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

This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

The marking of the equipment or protective system shall include the following:-

 **II 2 GD EEx eib IIC T(see schedule) T<sub>amb</sub> (see schedule) T(see schedule) T<sub>amb</sub>(see schedule)**

This certificate may only be reproduced in its entirety and without any change, schedule included.

File No: **EECS 1112/03/012**

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.



Electrical Equipment Certification Service  
Health and Safety Executive  
Harpur Hill, Buxton, Derbyshire, SK17 9JN, United Kingdom  
Tel: +44(0)1298 28000 Fax: +44(0)1298 28244  
internet: [www.bascefa.com](http://www.bascefa.com) e-mail: [bascefa.info@hsl.gov.uk](mailto:bascefa.info@hsl.gov.uk)



**I M CLEARE**  
DIRECTOR  
30 August 2002



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## Schedule

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## EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2220X

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### Description of Equipment or Protective System

The Wolf Torches TS-2X and TR-2X are portable lights with a moulded plastic case and lens ring, and a toughened glass or plastic lens. The lens and metallised plastic reflector are held in place by the lens ring which screws onto the torch body. Effective sealing is ensured by a nitrile or tpe seal fitted round the outer rim of the reflector.

The torch is available in two different body styles. The TS-2X has a straight body where the lens and reflector must be removed in order to insert and remove the batteries. The TR-2X has a right angled body where the lens is at 90° to the orientation of the batteries. A removable end cap is screwed onto the base of the torch body to allow insertion and removal of the batteries. A nitrile 'O' ring located in a groove in the torch body provides an effective seal.

The impact resistant enclosure provides ingress protection equivalent to IP67.

The switch slider mechanism causes a rotating pinion passing through the torch body to force two metal contacts together.

Power is provided by means of two R20, LR20, IEC 60086 type primary cells. The correct orientation of the batteries is clearly marked on the torch body.

An optional low power indicator may be fitted, illuminating an LED when the battery voltage falls below a pre-determined threshold.

The following bulb - battery combinations may be used within the temperature classifications indicated:

Type	Bulb		Cells	Ambient (°C)	T class	Dust temp (°C)
	Min voltage	Max. current				
halogen	2.4	0.85	R20 / LR20	-20 to +55	T3	95
xenon	2.4	0.93				
krypton vacuum	2.2	0.85				
halogen	2.4	0.85	R20 / LR20*	-20 to +55	T4	95
xenon	2.4	0.93				
krypton vacuum	2.2	0.85				
halogen	2.4	0.85	R20 / LR20**	-20 to +40	T4	75
xenon	2.4	0.93				
krypton vacuum	2.2	0.85				
vacuum	2.4	0.5	R20***	-20 to +40	T6	-
vacuum	2.4	0.5	R20/LR20	-20 to +40	-	65

LR20\* - use only specified LR20 cells for gas, vapour and mist applications

LR20\*\* - use only specified LR20 cells for gas, vapour and mist applications

R20\*\*\* - use only specified R20 cells



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### EC-TYPE EXAMINATION CERTIFICATE N° BAS02ATEX2220X

#### Permitted Cells

LR20\* : Duracell Ultra, Energizer Alkaline, Energizer Industrial, Eveready Gold

LR20\*\* : Varta Universal Alkaline., Varta Alkaline. Value Pack, Varta Electric Power, Kodak Alkaline, Exide Alkaline, Cegassa Alkaline, Duracell Alkaline, Duracell Plus, HiTech Alkaline. Professional, RS Alkaline, Sanyo Alkaline, Duracell Ultra, Energizer Alkaline, Energiser Industrial, Eveready Gold, Rayovac maximum, Duracell Procell.

R20\*\*\* : Eveready Superplus, Phillips Longlife, Exide Super, Exide Premum, GP Greencell, GP Supercell

If torches are certified for dust only atmospheres there is no restriction on which R20 or LR20 cells are used.

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#### Special Conditions For Safe Use

1. When there is a restriction on the type of cells which can be used the certificate number shall include an 'X'. Only those indicated in the certificate schedule may be used.

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#### Essential Health and Safety Requirements

All requirements are covered by compliance with EN 50014: 1997 + Amds 1 & 2, EN 50019: 2000, EN 50020: 2002 and EN 50281-1-1: 1998.

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#### DRAWINGS

Number	Issue	Date	Description
TP-721	1	14/5/02	General arrangement - 2 cell straight
TP-722	1	14/5/02	Detail - 2 cell straight
TP-723	1	14/5/02	General arrangement - 2 cell right angle
TP-724	1	14/5/02	Detail - 2 cell right angle
TP-821	1	14/5/02	LED indicator circuit
TP-921	1	14/5/02	Approval code options

This certificate may only be reproduced in its entirety and without any change, schedule included.



**SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

**Equipment or Protective System Intended for use in Potentially Explosive Atmospheres  
Directive 94/9/EC**

- 3 Supplementary EC - Type Examination Certificate Number: **BAS02ATEX2220X/1**
- 4 Equipment or Protective System: **WOLF TORCH TS-2X / TR-2X**
- 5 Manufacturer: **THE WOLF SAFETY LAMP CO LTD**
- 6 Address: **Saxon Road Works, Sheffield, S8 0YA**

This supplementary certificate extends EC - Type Examination Certificate No. BAS02ATEX2220X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. Baseefa (2001) Ltd., Notified Body Number 1180, is responsible only for the additional work relating to this supplementary certificate and any other supplementary certificate it has issued.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa (2001) Ltd. Customer Reference No. 1112

Project File No. 03/0282

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

**Baseefa (2001) Ltd.**

Health and Safety Laboratory Site, Harpur Hill,  
Buxton, Derbyshire SK17 9JN

Telephone +44 (0) 1298 28255 Fax +44 (0) 1298 28216

e-mail [info@baseefa2001.biz](mailto:info@baseefa2001.biz) web site [www.baseefa2001.biz](http://www.baseefa2001.biz)

Registered in England No. 4305578 at 13 Dovedale Crescent, Buxton,  
Derbyshire, SK17 9BJ

**R S SINCLAIR**

**DIRECTOR**

**On behalf of**

**Baseefa (2001) Ltd.**



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## **Schedule**

### **8 Description of the variation to the Equipment or Protective System**

#### **Variation 1.1**

- To permit
- i. Optional use of a spacer washer in the reflector assembly.
  - ii. Addition of a rib on the inside of the end cap.
  - iii. Addition of direct equivalents for the enclosure body material.
  - iv. Inclusion of Pifco Optimax alkaline manganese LR20 batteries for T4 in 40°C ambient.
  - v. A correction to the circuit diagram and addition of varying contact form

### **9 Report Number**

None.

### **10 Special Conditions for Safe Use**

None additional to those listed previously.

### **11 Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

### **12 Drawings and Documents**

<b>Number</b>	<b>Sheet</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
TP-722		2	27/03/03	Detail – 2 cell straight
TP-724		2	27/03/03	Detail – 2 cell right angle
TP-821		2	27/03/03	LED indicator circuit
TP-921		2	27/03/03	Approval code options