1 **CONFORMITÉ EUROPÉENE**

EU - TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU – Annex III**

3	EU - Type Examination Certificate No.:	**ERO24ATEX0013X**
4	Product:	**Acoustic Pneumatic TDE Horn** **Models TDE 198 Ex, TDE 360 Ex, TDE 450 Ex.**
5	Manufacturer:	**Moflash Signalling Limited**
6	Address:	**11 Upper Conybere Street, Warwick Road, Highgate, Birmingham, B12 0EB, United Kingdom**

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

8 Element Materials Technology, Notified Body number 2812, 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 product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report **TRA-063338-33-00A**.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN ISO 80079-36:2016** **EN ISO 80079-37:2016**

Except in respect of those requirements listed at section 18 of the schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

Ⓔx II 2G Ex h IIB+H_2 T6 Gb **-30 °C ≤Ta ≤ 70 °C**

Ⓔx II 2D Ex h IIIC T85 ºC Db **-30 °C ≤Ta ≤ 70 °C**

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.

S P Winsor, Certification Manager

Issue date: 2025-04-15

Element Materials Technology Rotterdam BV
Zekeringstraat 33, 1014 BV, Amsterdam, Netherlands
Registered in the Netherlands. Registered Office: PO Box 6854, 4802 HW, Breda, Netherlands
Company Reg. No. 24170257

13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER ERO24ATEX0013X

15 Description of Product

The equipment is a bronze and stainless steel acoustic pneumatic horn to be install as a fixed equipment in hazardous location zones 1 and 21.

The TDE pneumatic horn uses compressed air, which flows from the inlet line through a narrow opening past the bronze diaphragm, causing the diaphragm to vibrate, which creates sound waves. The sound wave travel through the trumpet horn, serving as an acoustic impedance transformer to amplify the transfer of sound energy from the diaphragm to the open air, making the sound louder.

The TDE pneumatic horn comprises of a phosphor bronze diaphragm membrane encased in a 316L stainless steel diaphragm casing. The back lid of the diaphragm casing is made of MS58 Brass and is designed with threads in order for the lid to be screwed directly into the diaphragm casing. The TDE pneumatic horn is to be secured to a wall or any flat surface, using the two 8.50 mm diameter mounting holes positioned 135 mm apart, located on the stainless steel diaphragm casing. The TDE trumpet horn comes in three different size variations; 198 mm, 360 mm and 450 mm in length. The trumpets are made of brass that has been coated in black varnish and comprise of threads at the narrow end so that the horn can be screwed directly into the stainless steel diaphragm casing. In order to make sure the trumpet horn is tightly secured, a M4 grub screw is used for added security.

Rating

Model	Air Pressure	Air Consumption	Frequency	dB(A)
TDE 198 Ex	2 -10 bar	2 - 3.5 l/s	660 Hz	116-138
TDE 360 Ex	1.5 -10 bar	1.5 - 3.5 l//s	377 Hz	116-132
TDE 450 Ex	1.5 - 10 bar	1.5 - 3.5 l//s	307 Hz	116-132

16 Test Report No. (as added for this issue of the certificate): TRA-063338-33-00A.

17 Specific Conditions of Use

1. The air supply tube must be protected from direct UV radiation.
2. The equipment shall be suitably bonded to a common earth point.

Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

18 Essential Health and Safety Requirements (Directive Annex II)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

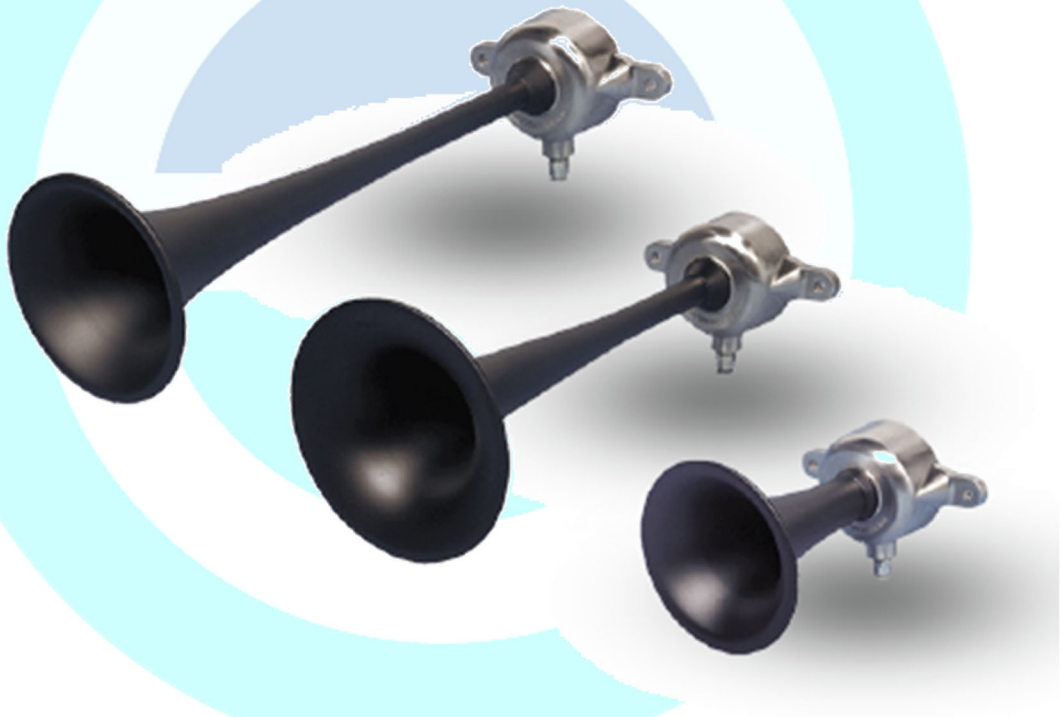
20 Routine Tests

None.

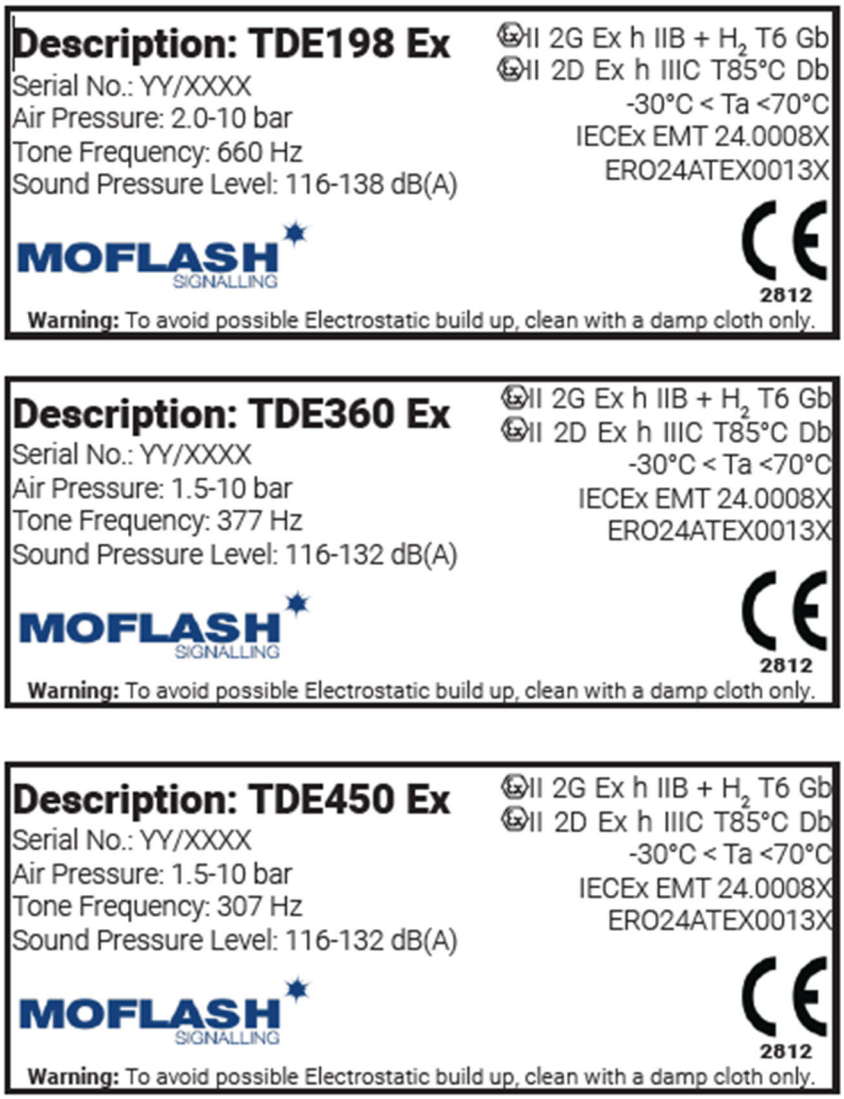
21 Specific Conditions for Manufacture

None.

22 Photographs



23 Details of Markings



24 Certificate History

Original certificate	2025-04-15	First issue.

This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations and amendments.

25 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

26 Notes to this certificate

Element Materials Technology certification reference: ERO0421508P83 (GU-MFOQ-0016).

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.

27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

(i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.

(ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER ERO24ATEX0013X

APPENDIX A - TECHNICAL DOCUMENTS			
Title:	**Drawing No.:**	**Rev. Level:**	**Date:**
TDE Ex Series Pneumatically Driven Air Horn	Doc: S00662	01	2024-11-04
TDE AIRHORN, ATEX (Technical Drawing)	TDE 195Ex/360Ex/450Ex	01	2025-03-19
MoFlash TDE Ex rating plate drawing.	-	01	2025-03-11

Note: The symbol " - " indicates that this information was not available.