MOFLASH SIGNALLING

INSTALLATION INFORMATION

PLEASE READ PRIOR TO INSTALLATION



TDE EX Series
Pneumatically Driven Air Horn

ACOUSTIC SIGNALLING DEVICE

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APPROVALS AND CONFORMITIES

ATEX RoHS

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Explosion Proof approval

The Ex h Approved TDE Series Pneumatic Air Driven Horn is specifically engineered for use in hazardous areas, offering a high-decibel warning signal powered by compressed air. Its Ex h approval signifies compliance with stringent safety standards for operation in environments with flammable gases or dust, making it suitable for industries like petrochemicals, mining, and manufacturing. The horn's durable construction ensures reliability and performance, essential for effective communication and safety in challenging conditions.

The equipment has been designed and constructed in accordance with Type of Protection 'c' (constructional safety), in compliance with the applicable safety requirements of EN ISO 80079-37:2016, as it is intended to operate within the parameters specified.

Types of Approval and Standards Applied

IECEx:	**ATEX:**
IEC 60079-0:2017	EN IEC 60079-0:2018
ISO 80079-36:2016	EN ISO 80079-36:2016
ISO 80079-37:2016	EN ISO 80079-37:2016

These products have been tested by **Element Materials Technology**, who are UKAS certified to BS EN ISO/IEC 17025:2005 and ISO/IEC 17065:2012. It is also a Notified Body for the ATEX Directive and an IECEx Certification body and an IECEx Testing Laboratory.

Certificate Numbers

IECEx: IECEx EMT 24.0008X **ATEX:** ERO24ATEX0013X

Zones, Groups and Temperature Classifications

The Moflash TDE Ex Series are certified to the following approvals:

Ex II 2G Ex h IIB + H_2 T6 Gb
Ex II 2D Ex h IIIC T85°C Db

This means that the units can be installed in locations with the following conditions when connected to an approved system:

Zones

Zone 1	Explosive gas air mixture likely to occur in normal operation.
Zone 2	Explosive gas air mixture not likely to occur, and if it does, it will only exist for a short time.
Zone 21	Explosive dust air mixture likely to occur in normal operation.
Zone 22	Explosive dust air mixture not likely to occur, and if it does, it will only exist for a shortime.

Gas Groupings

IIA, IIB + H_2 (also including presence of Hydrogen)

Dust

IIIA Fibres and Flying, IIIB Flour and Grain, IIIC Metal Dust.

Ambient Conditions

Operating Temperature Range:	-30°C < Ta <70°C
Storage Temperature Range:	-40°C < Ta <70°C
Max. Relative Humidity:	95% @ 40°C

The maximum surface temperature of an operating product will not exceed 85°C.

A Declaration of Conformity, ATEX & IECEx Certificates are available upon request or alternately visit **www.moflash.co.uk.**

Health and Safety Notes

Before proceeding with the installation, it is essential for the user or installer to conduct a risk assessment concerning the installation and safety of the Horns during operation. The Air Horn can reach an audibility level of up to 138dB at a distance of 1 meter, necessitating careful consideration of the unit's placement to avoid proximity to individuals. It is advised to maintain a minimum separation distance of at least 5 meters (16.4ft) between the Air Horn and any people.

WARNING! Damage may be caused to a persons hearing if they are within close proximity to the Air Horn when activated and they are not equipped with the adequate protective equipment in the form of Ear Defenders.

IMPORTANT: DO NOT REMOVE OR CHANGE ANY COMPONENTS OF THE AIR HORN.

General Installation Notes

- Installation must be carried out in accordance with the latest codes and regulations by qualified personnel.
- Avoid mounting the Horn where it will be subjected to excessive vibration.
- Do not exceed the maximum stated bar Air Pressure **(1.5-10 bar for TDE360 & TDE450 / 2-10 bar for TDE198)**
- The Air Horn should be mounted on a downward slope, typically between 1-2°. This helps keep the inner of the trumpet free from fluids and debris build up. Please ensure no obstacles block the front of the Horn
- Utilise the 2 x 8.5mm mounting 'lugs' located on the side of the diaphragm housing to mount the Horn

Moflash Signalling Limited is unable to provide guidance on system installations. However, the following considerations are essential for ensuring the product operates effectively:

- Adequate measures should be implemented to enable the immediate application of full & consistent air pressure to the product thus ensuring the correct frequency & dB output are produced when necessary.
- The system must facilitate sufficient air transfer speed and airflow through the piping to reach each air horn.
- It is important to take into account the air volume needed for the duration of the air horn signal, necessitating reserve air tanks with adequate capacity.
- A compressor must be capable of delivering the required air levels to fill the tanks and the system.
- As a general rule compressed air installations should meet ISO 8573-1 criteria.

Connection - 1/4" Push in fitting for Ø8x6mm air hose

Maintenance

- The Horns contain no parts that require maintenance. However, checks should be made to the air connections to the unit from time to time to ensure maximum air pressure is maintained.

Special Condition of Use

- The air supply tube must be protected from direct UV radiation. (e.g covering the tube or using a material that is UV resistance).
- The equipment must be suitably bonded to a common earth point using the air horn fixing points.
- The horn and in particular the interior of the horn must be free of dust deposits and not be blocked.
- Use only clean air and whose temperature does not exceed the temperature range -30 °C +70 °C.
- To avoid the possibility of a potential electrostatic charge build up, it is recommended that the exterior of the product is periodically wiped down with a clean damp cloth.
- Ignition hazard summary - Hot Surfaces, Mechanical Sparks, Electrostatic Charge buildup.

Product Marking

- The Product will be marked with a serial number in the format YY/XXXX, where YY indicates the last 2 digits of the year of manufacture and the XXXX is a unique code produced for the product.

Moflash Signalling Limited accepts no liability for any consequences following use of this document. Any technical specifications and products referred to within this document are subject to change without notice due to continual improvement and product development policies. All dB(A) figures are subject to environmental conditions. The units are sold under Moflash standard conditions of sale, available on request. Additional resources, including installation sheet translations, certificates and DoCs are available from the **www.moflash.co.uk** website**.**