

1. **TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially explosive atmospheres
Directive 2014/34/EU**
3. Type Examination Certificate Number: **EESF 19 ATEX 043X**
4. Product: **Blast Damper**
Certified types: **BDH**
5. Manufacturer: **Halton Marine Oy**
6. Address: **Pulttikatu 2, 15700 Lahti, Finland**
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Eurofins Expert Services Oy, Certification Body No. S017 accredited by the Finnish Accreditation Service (FINAS), 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 2014/34/EU of February 2014.

The examination and test results are recorded in confidential reports No. EUFI29-19001071-T1.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN ISO IEC 80079-36 (2016) EN ISO IEC 80079-37 (2016)
10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
11. This 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 the product shall include the following:



II 2 G	Ex h IIA, IIB, IIC T6...T3 Gb
II 2 D	Ex h IIIC T85 °C...T200 °C Db
I M 2	Ex h I Mb

Espoo, 30.3.2020
Eurofins Expert Services Oy

Kari Koskela
 Expert

Riku Vuorinen
 Manager

This document is digitally signed.

13. **Schedule**

 14. **Type Examination Certificate EESF 19 ATEX 043X**

 15. **Description of Product**

Halton BDH blast dampers are shock tube and debris impact tested dampers for use in offshore, onshore and heavy industry ventilation systems. The BDH can be installed in rectangular ducts or wall openings. When the blades are in the open position, the device does not cause significant pressure loss, noise or flow disturbance. Blast dampers are set from outside. An open-closed indicator is visible on the outside of the damper.

There is no external power source needed to operate damper. In case of blast incident, pressure wave closes blades. There is locking mechanism preventing blades to open during negative pressure phase of pressure wave. After incident, blades remain locked in closed position, until damper is set (armed) again.

This document certifies that the fire dampers can't produce an ignition source which can ignite an explosive atmosphere.

The refractory is not covered.

The equipment is not designed to stop an explosion.

 16. **Report Number**

EUFI29-19001071-T1

 17. **Specific Conditions of Use**

Galvanized steel: $-20 \leq T_{amb} \leq 80 \text{ }^{\circ}\text{C}$

Stainless steel: $-60 \leq T_{amb} \leq 80 \text{ }^{\circ}\text{C}$

 18. **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed at item 9.

 19. **Thermal ignition assessment and tests**

Temperature class T1 to T6, conditional upon temperature class of assembled certified equipment and air flow temperature. T6 without assembled certified equipment and air flow temperature below 80 °C.

 20. **Drawings and Documents**

Drawings and documents are listed in the confidential report.

 21. **Certificate History**

Issue	Date	Report No.	Change
-	30.3.2020		Prime certificate