

EU-Type Examination Certificate

Equipment or Protective System intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 16 ATEX E 023 X**

Product: **AQUARIUS® Static Mixer type ECMX**

Manufacturer: **Wärtsilä Water Systems Ltd.**

Address: **Fleets Corner, Poole Dorset BH17 0JT, UK**

This product and any acceptable variation thereto are specified in the appendix to this certificate and the documents therein referred to.

DEKRA EXAM GmbH, Notified Body number 0158, 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 No. BVS PP 16.2061 EU.

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

EN 60079-0:2012 + A11:2013 General requirements

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 appendix to this certificate.

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.

The marking of the product shall include the following:

Ex II 2G IIC T4

DEKRA EXAM GmbH
Bochum, 2016-04-22

Certifier

Approver

13 **Appendix**

14 **EU-Type Examination Certificate**

BVS 16 ATEX E 023 X

15 **Product description**

15.1 **Subject and type**

Static mixer type ECMX (type code H*ECMX****)

Type code of the BWMS system:

H

**Special
SP**

Non Standard

Build Orientation

A Horizontal
B Vertical

BWMS Voltage / Frequency

01 440 V 60 Hz
02 400 V 50 Hz

Build Type

K Loose kit of parts
(Not skid mounted)

ATEX Class

X Ex IIC T4

Module Type

UV UV Reactor
F Filter
ECM EC Mixer

Total Rated Capacity (TRC) Flow.

0050 50 m³/hr TRC
0080 80 m³/hr TRC
0125 125 m³/hr TRC
0180 180 m³/hr TRC
0250 250 m³/hr TRC
0300 300 m³/hr TRC
0375 375 m³/hr TRC
0430 430 m³/hr TRC
0500 500 m³/hr TRC
0550 550 m³/hr TRC
0750 750 m³/hr TRC
0850 850 m³/hr TRC
1000 1000 m³/hr TRC
1200 1200 m³/hr TRC
1500 1500 m³/hr TRC
2000 2000 m³/hr TRC
2400 2400 m³/hr TRC
3000 3000 m³/hr TRC
3300 3300 m³/hr TRC
3600 3600 m³/hr TRC
4000 4000 m³/hr TRC

15.2 Description

The AQUARIUS® ECMX is a static mixer for use in a modular ballast water management system (BWMS) for the treatment of ballast water and eradication of aquatic invasive species on cargo vessels by mixing the water with the disinfectant hypochlorite. The BWMS consists of the static mixer ECMX, a back flush filter (certified in BVS 14 ATEX E 012 X) and additional parts (e. g. electrolysis module for the sodium hypochlorite production and sodium hypochlorite buffer de-gas tank and dosing module) installed in the non-hazardous area.

The static mixer type ECMX itself consists of the mixer housing, 2 or 3 Ex Chlorine Monitors (TRO), and additional equipment (e. g. flow meter, junction box, waste pump) which is separately certified.

15.3 Parameters

Nominal voltage 380-440 V, 50/60 Hz

16 Report Number

BVS PP 16.2061 EU, as of 2016-04-22

17 Specific Conditions of Use

17.1 The static mixer type ECMX shall only be operated when completely filled with water.

17.2 Additional Chlorine Monitors (TRO) are necessary for the operation of the static mixer type ECMX. These monitors shall be suitable for use in Marine hazardous areas (zone 1, IIC-T4 @50°C).

18 Essential Health and Safety Requirements

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

19 Drawings and Documents

Drawings and documents are listed in the confidential report.