EU-TYPE EXAMINATION CERTIFICATE

1

2 Equipment or protective systems Intended for use in Potentially Explosive Atmospheres – Directive 2014/34/EU

3 EU-Type Examination Certificate Number **LOM 22ATEX1035X** **Issue: 0**

4 Protection system: Flap valves
Types NOVExII-***

5 Manufacturer: Adix Ingeniería S.L.

6 Address: Salida 118, CM-42 km 2
13700 -TOMELLOSO (Ciudad Real)
SPAIN

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

8 Laboratorio Oficial J.M. Madariaga (LOM), Notified Body No. 0163, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this protection sytem 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 **LOM 19.285T**

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

- Standards **EN 16447:2014** **EN 15089:2009**

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the protection system is subject to the 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 protection system in accordance to the Directive 2014/34/EU. 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 protection system shall include the following:

II D EN 16447

Getafe,
Electronically signed by:

GARCIA TORRENT FRANCISCO JAVIER - 05356542A
2022.05.09 12:42:30 +02'00'

Certification Committee

RCPCER 25.7/6

ENAC CERTIFICACIÓN Nº 159/C-PR360
UNIVERSIDAD POLITÉCNICA DE MADRID
(Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29)
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13 SCHEDULE

14 EU-Type Examination Certificate Number **LOM 22ATEX1035X** **Issue: 0**

15 Description of the protection system

NOVExII valves are protection systems that prevent the propagation of an explosion of flammable dusts through pipes or ducts.

During normal operation, airflow passes through the valve in the proper direction. In the absence of flow, the valve can operate normally open due to the action of permanent magnets or normally closed due to the action of gravity. In the latter case, the valve will open depending on the process flow in the appropriate direction and in equilibrium with the action of gravity.

In the event of an explosion from the side towards which the process flow is directed, the back pressure generated will cause the valve to close. This will be locked in the closed position by means of locking latches.

The valves can work in push or pull flow. They can be used in horizontal and vertical versions, as well as in any other intermediate inclination, with up to 3 elbows.

They are designed to be used associated with containers to be protected with venting panels, with or without self-closing, or chemical suppression systems.

They can incorporate position detector elements and others of the appropriate category for the environment in which they are used. These detectors are not part of this certificate.

Characteristics:

- Valve resistance to explosion shock: 2.9 barg up to 500 mm and 0.9 barg up to 1250 mm
- Reduced maximum pressure of the vessel where the explosion originates: 1 bar for diameters up to 500 mm
  0.5 bar for diameters greater than 500 mm
- Maximum velocity of the process fluid
  When push: 18 m/s for diameters up to 500 mm and 10 m/s for diameters greater than 500 mm
  When pull: no limit
- Dust type: Any type, included organic and metallic
  $K_{st} \leq 305$ bar·m/s, $P_{max} \leq 9.2$ bar, EMI ≥ 1 mJ, TMI ≥ 110 ºC
- Installation distance from the enclosure to be protected: Minimum 5 m, Maximum 15 m
- Size range: DN100 to DN1250

Nomenclature of types NOVExII___ _ _

Size
100 to 1250

Material
A = Stainless steel AISI304 or AISI 304L
B = Carbon steel Hardox
C = Carbon steel S235JR o DD11
D = Stainless steel AISI316 or AISI 316L
E = Body in carbon steel S235JR or DD11
Flap in stainless steel AISI304 or AISI304L
F= Body in carbon steel S235JR or DD11
Flap in stainless steel AISI316 or AISI316L
G= Stainless steel 310S

Version
S= Standard
A= Advanced

13 SCHEDULE

14 EU-Type Examination Certificate Number **LOM 22ATEX1035X** **Issue: 0**

16 Report **LOM 19.285T**

17 Specific conditions of use

- Maximum velocity of the process fluid in push operation: 18 m/s for diameters up to 500 mm
  10 m/s for diameters greater than 500mm
- The gaskets of the flap covers must be checked periodically.
- The possible formation of blockages that prevent a correct closing of the flap must be checked periodically.
- The valves may only be used in pipes associated with containers with explosion venting or adequate suppression systems that guarantee a reduced pressure of no more than 1 bar for diameters up to 500 mm, or 0.5 bar for diameters greater than 500 mm.
- After an explosion event, the condition of the moving parts of the valve must be thoroughly checked.

18 Essential Health and Safety Requirements

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9.

The standard EN 16447:2014 covers all the requirements for valves that remain normally closed and are opened by the flow of the process fluid. It is applicable for the installation when it has to be protected from an explosion that spreads in the opposite direction to the process flow.

The standard EN 15089:2009 covers additional requirements for normally open and permanent magnet latched flaps. It is applicable for the installation when it has to be protected from an explosion that propagates in the direction of the process flow.

19 Documents and drawings

Number	Sheets	Issue	Date	Description
5204	7	-	2022-04-21	Technical description
4437	1	-	2021-10-05	NOVExII500CS valve drawing
4447	1	-	2021-10-15	NOVExII100CS valve drawing
4448	1	-	2021-10-15	NOVExII100CA valve drawing
4449	1	-	2021-10-20	NOVExII500CA valve drawing
4450	1	-	2021-10-20	NOVExII1250CA valve drawing
4468	1	-	2021-10-20	NOVExII1250CS valve drawing
4469	3	-	2021-10-20	Flap detail drawings
4986	2	-	2022-03-30	Detail of locks drawings
4987	1	-	2022-03-30	General dimension drawing
5335	13	-	2022-04	User manual