



EU-TYPE EXAMINATION CERTIFICATE

Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

EU-Type Examination Certificate Number: **CSANe 24ATEX1186X** Issue: **0**

Equipment: **NDX...2 Valve Controller (NDX abc2efghijklmnopqrs; refer to section 15 for model code breakdown)**

Manufacturer: **Valmet Flow Control Oy**

Address: Vanha Porvoontie 229
Vantaa FI-01380
Finland

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

CSA Group Netherlands B.V., Notified Body No. 2813 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 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 reports listed in item 16.2.

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

EN IEC 60079-0:2018+AC:2020-02

EN 60079-1:2014+AC:2018-09

EN 60079-31:2014 and IEC 60079 31:2022+COR1:2023 Ed. 3.0

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

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed in item 17 of this certificate.

This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance with 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.

The marking of the product shall include the following (additional marking is provided in the Schedule as a part of item 15, if applicable):



II 2GD

Ex db IIB+H2 T6...T4 Gb

Ex tb IIIC T85...T113°C Db

*T4 and T5: -40°C to +85°C OR T6: -40°C to +75°C

T113 and T95: -40°C to +75°C OR T85: -40°C to +74°C

Signed: M Halliwell

Title: Senior Director of Operations

Date: 18 September 2025



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13

SCHEDULE

14 **EU-Type Examination Certificate Number:** **CSANe 24ATEX1186X** Issue: **0**15 **Description:**

The NDX...2 Intelligent valve controller is comprised of a base and cover with an approximate internal volume of between 408 cm³ to 471 cm³; depending on the electronic modules that are fitted. The equipment is manufactured from cast aluminium EN AC-43400 and EN AC-42100 with a circular glass window secured in the lid using brackets. The lid is secured using four M8 x 30mm Captive fasteners, at each corner. The enclosure is divided with the electronics in the Ex d portion and the pneumatic relay situated outside the Ex d portion. Non-flammable process air is supplied at 8 bar to the equipment through a containment system fitted with both flow limiters and flame arrestors. The enclosure is provided with breathers to maintain the internal pressure below 1.1 times atmospheric pressure. The enclosure meets the requirements for IP66. Power is supplied by a 4-20mA current (maximum 30VDC), either taken from the control signal or as a direct mA control signal, and uses the supply pressure to control valve position by means of regulating the actuator pressure.

For NDX abc2efghijklmnopqrs the following Model Code breakdown applies:

Where:

- a = Pneumatic action
1 Single acting
2 Double Acting
- b = Pneumatic capacity
5 Normal Capacity (80Nm³/h)
- c = Fail Action
1 Fail safe
- d = ENCLOSURE
2 Flameproof/Explosion Proof -Aluminum
- e = Communication / input signal range
H HART communication, 4-20 mA current signal
T HART/4-20 mA and 4-20 mA Position Transmitter
N 4 – 20mA (No HART)
M 4 – 20mA and Position Transmitter (No HART)
D HART / 4 – 20 mA + 2 x DO (Namur)
L HART / 4 – 20 mA + PT + DO (Namur)
F FOUNDATION fieldbus, physical layer according to IEC 61158-2.
P Profibus PA, physical layer according to IEC 61158-2.
- f = Temperature Range
G General: -40 to +85°C (refer to marking section for further breakdown)
- g = - Standard; Ex i & I/O extension capable
- h = Approvals for Hazardous Areas (1/2)
A ATEX/IECEx Ex d IIB+H2
* Or according NDX _ _ _ type code (other options available, not covered by this certificate)
- i = Approvals for Hazardous Areas (2/2)
A ATEX/IECEx Ex d IIB+H2



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* Or according NDX _ _ _ type code (other options available, not covered by this certificate)

- j = Pneumatic connections & gauges
0 1/4NPT without gauges (no block, no gauges)
1 1/4NPT with gauges (block with 1/4NPT threads + gauges)
2 G1/4 without gauges (block with G1/4 threads)
3 G1/4 with gauges (block with G1/4 threads + gauges)
- k = Variant
N Neles
L Neles, without LUI (Local User Interface)
- l = Diagnostics
0 Advanced Diagnostics
1 Premium Diagnostics
- m = Special Version
0 None
- n = Reserved (Option slot #1)
0 None
- o = Reserved (Option slot #2)
0 None
- pqr = Characters for partner identification - shall not affect hazardous area approvals
- s = Y special feature- shall not affect hazardous area approvals

16 Drawings and documents:

16.1 Technical documents:

Refer to Certificate Annex.

16.2 Associated reports and certificate history:

Issue	Date	Report number	Comment
0	18 September 2025	R80213075A	The release of the prime certificate.

17 Specific conditions of use (denoted by "X" after the certificate number):

- 17.1 Cover securing fasteners shall be tightened to 15 Nm. The property class of the fasteners is A4-80 and replacements shall only be sourced from the manufacturer.
- 17.2 The Mylar shim, used for securement of the window, shall be periodically inspected to ensure that it is in good condition/intact.
- 17.3 The equipment has a non-conducting coating and non-metallic labels and may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user shall ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces.
- 17.4 The labels are not earthed and have a capacitance of up to 56pF with respect to an earthed conductor. If a charge-generating mechanism is present, an incendive level of charge could migrate to these metal parts and subsequently discharge to earthed metal. Precautions are required to ensure that a charge-generating mechanism is unlikely to be present and/or discharge to earthed metal is improbable.



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- 17.5 Flameproof joints are not intended to be repaired.
- 17.6 The control medium shall be particulate free and have a dew point of at least 10 °C below the ambient temperature to ensure no risk of condensation. The maximum rated pressure of 8 bar shall not be exceeded.
- 18 **Essential health and safety requirements of Annex II (EHSRs):**
The relevant EHSRs that are not addressed by the standards listed in item 9 of this certificate have been identified and conformity of the product demonstrated in the reports listed in item 16.2.
- 19 **Remarks and additional information:**
The use of this certificate is subject to the regulations applicable to holders of CSA Group Netherlands B.V. certificates.
Compliance of the product with the applicable safety requirements of the relevant industrial standards has not been verified and is not covered by this certificate.
- 19.1 **Conditions of manufacture:**
- 19.1.1 The NDX...2 flameproof enclosure body shall be subjected to batch overpressure testing to 493.0 psi (33.99 bar) for at least 10 seconds for in accordance with EN 60079-1:2014+AC:2018-09. Samples selection is based on:
- a) For a production batch up to 100, a sampling of 8 shall be tested at the pressures noted, with no failures.
 - b) For a production batch from 101 to 1000, a sampling of 32 shall be tested at the pressures noted, with no failures.
 - c) For a production batch from 1001 up to 10 000, a sampling of 80 shall be tested at the pressures noted, with no failures.
 - d) Batches above 10 000 shall be subdivided into smaller batches.
- If there are any non-compliant test results, 100% of all remaining samples in the batch shall be tested at the routine pressures noted of 246.6 psi (17 bar) for EN 60079-1:2014+AC:2018-09. Future batches shall be routine tested at 246.6 psi (17 bar) for EN 60079-1:2014+AC:2018-09 until confidence is re-established to consider further batch testing.
- Following this test, the sample must be inspected to confirm no rupture/damage/permanent deformation of the equipment.





Certificate Annexe

Document History

Issue – 0

Documents Introduced or Revised

Drawing	Sheets	Rev.	Date (Stamp)	Title
F97015	1 to 4	J.5	02 Sep 25	Valve Controller Ex D Documentation NDX_2
F87237	1 to 1	0.2	18 Aug 25	Flame Arrester 16x9 NDX (125µm); Item 7
F75251	1 to 1	0.4	18 Aug 25	Flame Arrestor NDX 6x6 (88 µm); Item 8
F78434	1 to 1	A.2	18 Aug 25	Screw, M8x30 Captive, NDX 2; Item 25
F97373	1 to 3	C.1	18 Aug 25	Cover, Main Cover Ex D (A4) NDX; Item 17
F97283	1 to 1	0.2	18 Aug 25	Window, Ex d Main Cover 102x10 A4 NDX; Item 18
F97410	1 to 1	A	18 Aug 25	Fixing Plate, Ex Cover Window A4 NDX; Item 19
F98114	1 to 1	B	18 Aug 25	Shim, 100.8/84X0.25, NDX; Item 19a
F97371	1 to 1	B	18 Aug 25	Cover Assembly, Main Cover Ex D A4 NDX; Item 15
F75369	1 to 1	B.1	18 Aug 25	Gasket, Cover Gasket, NDX
F88087	1 to 2	S.1	18 Aug 25	Housing, Main Machined, NDX 2
F05382	1 to 1	-	18 Aug 25	Grounding Screw Assembly; Item 3
F92546	1 to 1	0	18 Aug 25	Washer, U-shape M4, NDX; Item 5
F79587	1 to 1	A	18 Aug 25	Restriction Assembly, Restriction dia 5/0.2 x 3 NDX; Item 11
6970700	1 to 1	E	18 Aug 25	Restriction Assembly, Restriction dia 5/0.3 x 3mm NDX; Item 12
F111532	1 to 1	0	18 Aug 25	Check Valve, Umbrella Valve Assembly, Sheet metal, NDX; Item 88
F109192	1 to 1	0	18 Aug 25	Seal, Umbrella Flat, 0.30mm NDX; Item 91
F109183	1 to 1	A	18 Aug 25	Plate, Umbrell Sheet Metal NDX; Item 92
F93571	1 to 1	A	18 Aug 25	Plug, 1/2" NPT, Hexagon Socket NDX; Item 83alt
F106013	1 to 2	D	18 Aug 25	Electronics Unit, Ex I capable and non-Ex CILI w Springs, NDX 1&2; Item 191
F81291	-	L	18 Aug 25	NDX A5 Full Master BOM, Main Board
F81458	1 to 22	L	18 Aug 25	NDX A5 Full Master Architecture (Schematic), Main Board
F108094	-	J	18 Aug 25	NDX Fieldbus FF BOM
F108109	1 to 18	D	18 Aug 25	NDX FF Architecture (Schematic)
F111114	-	K	18 Aug 25	NDX Fieldbus PA BOM
F111113	1 to 18	D	18 Aug 25	NDX PA Architecture (Schematic)
F78643	1 to 2	J	18 Aug 25	Interface Unit, NDX 1&2 LUI NDX; Item 207
F78981	-	K	18 Aug 25	NDX A5 LUI BOM
F78977	1 to 1	K	18 Aug 25	NDX A5 LUI, LUI (Schematic)
F66962	1 to 1	C	18 Aug 25	Prestage Unit Assembly, with nozzle NDX; Item 100
F86725	1 to 1	C	22 Aug 25	Additional Plate NDX_2_F
F122797	1 to 1	B	18 Aug 25	Identification Plate NDX_512_G-A ATEX IECEx Ex d
F78765	1 to 1	M	18 Aug 25	Identification Plate NDX_0_1_2 General Info (HART)
F110753	1 to 1	B	18 Aug 25	Identification Plate NDX_0_F/P_1_F/P_2_F/P General Info (Fieldbus/Profibus)
F120312	1 to 1	B	18 Aug 25	Sticker NDX Fieldbus Identification Label
F78774	1 to 1	P	18 Aug 25	Product Type Marking NDX Approval
F97379	1 to 15	F	02 Sep 25	NDX_2 – Ex d; Description
F121157	1 to 6	C	18 Aug 25	Justification to use NDX_0 breather testing for NDX_2
F122086	1 to 3	0	18 Aug 25	Justification for location change of gasket

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