



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx CSAE 24.0051X** Page 1 of 4 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2025-09-18

Applicant: **Valmet Flow Control Oy**
Vanha Porvoontie 229
Vantaa FI-01380
Finland

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

Optional accessory:

Type of Protection: **Flameproof 'd', Dust Enclosure 't'**

Marking: 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

Approved for issue on behalf of the IECEx
Certification Body:

Michelle Halliwell

Position:

Senior Director of Operations

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom





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Manufacturer: **Valmet Flow Control Oy**
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Manufacturing
locations: **Valmet Flow Control Oy**
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This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2022](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[GB/CSAE/ExTR25.0073/00](#)

Quality Assessment Report:

[NO/DNV/QAR09.0008/17](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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.

See annexe for more information

SPECIFIC CONDITIONS OF USE: YES as shown below:

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.
2. The Mylar shim, used for securement of the window, shall be periodically inspected to ensure that it is in good condition/intact.
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.
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.
5. Flameproof joints are not intended to be repaired.
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.



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Equipment (continued):

Conditions of Manufacture

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 IEC 60079-1:2014+COR1:2018 Ed. 7.0. 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 IEC 60079-1:2014+COR1:2018 Ed. 7.0. Future batches shall be routine tested at 246.6 psi (17 bar) IEC 60079-1:2014+COR1:2018 Ed. 7.0 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.

Annex:

[IECEx CSAE 24.0051X Issue 0 Annexe_1.pdf](#)

Annexe to: IECEx CSAE 24.0051X Issue 0

Applicant: Valmet Flow Control Oy



Apparatus: NDX...2 Valve Controller (NDX abc2efghijklmnopqrs; refer to product description for model code breakdown)

EQUIPMENT (continued)

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
 - * 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

Date: 18 September 2025

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Annexe to: IECEx CSAE 24.0051X Issue 0

Applicant: Valmet Flow Control Oy



Apparatus: NDX...2 Valve Controller (NDX abc2efghijklmnopqrs; refer to product description for model code breakdown)

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