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E-mail: [admin-mgr@explolabs.co.za](mailto:admin-mgr@explolabs.co.za)**GOVERNMENT APPROVED TEST LABORATORY**

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

**IA CERTIFICATE (IMPORT)**

Page 1 of 4

Date Issued: **25 Jul 2025**Certificate Validity: **25 Jul 2028**

**IA Certificate Validity:** In accordance with ARP 0108 and the National Code of Practice, import IA certificates has a validity period of three (3) years from the date of issue. The IA certificate's validity period depends on the validity of the international document that it is based upon, and it is invalidated should the international certificate be cancelled or the product quality assurance or notification becomes invalid. Equipment imported under a valid IA certificate and handed over to the end user, the IA Certificate validity falls away and the Ex equipment remains compliant with the relevant standards for its lifetime, provided the equipment is maintained in its original certified configuration. No modifications are allowed. Imported apparatus not sold by the IA certificate expiry date is deemed to not be covered by this IA Certificate and this IA Certificate shall undergo a renewal process. Renewal of this IA certificate is the responsibility of the IA Certificate Holder. The IA Certificate Holder must provide and maintain records to the end-user, of date of sale for traceability purposes.

Certificate Number:

**S-XPL/22.1473 X**Issue Number: **1**

Equipment:

**VG9000F ("ValvGuard") series safety valve controllers**

Model / Type:

**VG9200F series, types VG92..FX.. and VG9300F series, types VG93..FX..**

IA Certificate Holder:

**Valmet South Africa (Pty) Ltd**

IA Certificate Holder Location:

**237 Albert Amon Road, Meadowdale, Germiston**

Manufacturer:

**Valmet Flow Control Oy**

Manufacturer Location:

**Vanha Porvoontie 229, Vantaa FI-01380, Finland**

Serial No:

All serial numbers, imported between issued- and validity date and all serial numbers covered by either valid QAN or QAR.

Identified by Inspection Authority Number

**S-XPL/22.1473 X**

And as described in the Explolabs file number **XPL/23106/22.1473 Issue 1** is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of the South African National Standards.

**SANS 60079-0: 2019 Ed 6****IEC 60079-0: 2017 Ed 7**

Explosive atmospheres Part 0: Equipment — General requirements

**SANS 60079-11: 2012 Ed 4****IEC 60079-11: 2011 Ed 6**

Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"

**SANS 60079-15: 2010 Ed 4****IEC 60079-15: 2010 Ed 4**

Explosive atmospheres Part 15: Equipment protection by type of protection "n"

Risk of ignition provided:

| Protection afforded | Equipment Protection Level (EPL) | Performance of protection     | Conditions of operation                  | T class or Max Surface Temp (°C) |
|---------------------|----------------------------------|-------------------------------|------------------------------------------|----------------------------------|
|                     | Group                            |                               |                                          |                                  |
| Enhanced            | Gc<br>Group II                   | Suitable for normal operation | Equipment remains functioning in zone 2  | T6(85°C)<br>...<br>T4(135°C)     |
| Enhanced            | Dc<br>Group III                  |                               | Equipment remains functioning in zone 22 | T95°C<br>...<br>T125°C           |

DOCUMENT No: XPL0213

RELEASE DATE: 11/03/2025

REV: 9

This document is an Explolabs Controlled Document – Responsibility falls on personnel to ensure correct revision is applied as noted in the electronic system.

## 1. GENERAL

The marking of the VG9000F ("ValvGuard") series safety valve controllers shall include the following:

**Ex ic IIC T6...T4 Gc**

**Ex nA IIC T6...T4 Gc**

**Ex ic IIIC T95 °C...T125 °C Dc**

VG9000F ("ValvGuard") series safety valve controllers are intended to control on/off valves in hazardous industrial areas. FISCO compliant Fieldbus protocol has been utilized in the controllers. In addition, with distributed control system (DCS), the Fieldbus is used for supplying power to assigned functions of the equipment, e.g. for diagnostics and valve control. Separate intrinsically safe 24V Safety Control input is used in case of emergency situation for overriding all other tasks. The equipment accommodates three component boards (FBI, SVC and SA 4W), LUI (Local User Interface) module, prestage unit and limit switches (option).

Electrical rating, Ex nA:

$U_N = 28 V_{DC}$

The maximum input values of Fieldbus interface for Ex ic are:

$U_i \leq 24 V$

$I_i \leq 380 mA$

$P_i \leq 5,32 W$

$C_i < 5 nF$

$L_i < 10 \mu H$

These parameters comply with the requirement for FISCO Field device in accordance with standard SANS 60079-11 (2012).

The maximum input values of 24 V Safety Control input for Ex ic interface:

$U_i \leq 28 V$

$I_i \leq 150 mA$

$P_i \leq 1 W$

$C_i < 15 nF$

$L_i < 175 \mu H$

Based on the following documentation: IECEx EESF 20.0019X Issue: 1

## 2. INSTALLATION INSTRUCTIONS

It is the IA Certificate Holder's responsibility to supply OEM installation instructions with each unit offered for sale as required by IEC/SANS 60079-0, clause 30.

The equipment shall be installed, operated, and maintained in accordance with the manufacturer's instructions and the applicable South African standards and regulations.

3. SPECIAL CONDITIONS FOR SAFE USE *(denoted by "X" after certificate number)*

For Ex nA, the maximum allowed ambient temperature ranges according to different T Classes are:

- Tamb -40 °C ... +50 °C for temperature classes T6 or T95 °C
- Tamb -40 °C ... +75 °C for temperature classes T5 or T110 °C
- Tamb -40 °C ... +80 °C for temperature classes T4 or T125 °C

For Ex ic, the maximum allowed ambient temperature ranges according to different T Classes are:

- Tamb -40 °C ... +60 °C for temperature classes T6 or T95 °C
- Tamb -40 °C ... +75 °C for temperature classes T5 or T110 °C
- Tamb -40 °C ... +80 °C for temperature classes T4 or T125 °C

The permissible ambient temperature range depends on the used configuration. The ambient temperature range is marked on the identification plate.

At an ambient temperature  $\geq +70 ^\circ C$ , the temperature rating of the connection cable shall be in accordance with maximum ambient temperature range.

The safety valve controller shall be connected according to the manufacturer's instructions.

Provision shall be made to provide the transient protection at a level not exceeding 40% of the rated voltage of the supply and the position output circuit.

Selected cable gland shall not invalidate the type of protection.

4.

#### CONDITIONS OF CERTIFICATION

This approval is granted based on the submitted documentation.

Any modifications or alterations to the equipment will invalidate this IA Certificate.

The Certificate Holder is responsible for maintaining accurate records of the equipment and this IA Certificate.

All production units must be covered by either a QAN (Quality Assurance Notification) or QAR (Quality Assurance Report).

**Renewal:** This IA certificate may be renewed under a valid Quality Assurance Notification (QAN) or Quality Assurance Report (QAR). Imported apparatus not sold by the IA certificate expiry date must undergo this renewal process. This condition remains the responsibility of the IA Certificate Holder. Renewal of this IA certificate is the responsibility of the IA Certificate Holder.

Renewal involves a document review, including:

- Verification of the latest ATEX/IECEX certificate.
- Confirmation of a valid QAN/QAR.

Certificate holders are responsible for submitting these documents.

**5. MARKING**

The equipment shall bear the manufacturer's original marking plate containing all relevant Ex-certification details (applicable under the ATEX Directive). The following (or similar) information shall be clearly and permanently marked on all units:

IA Certificate Holder : Valmet South Africa (Pty) Ltd  
Ex Rating : Ex ic IIC T6...T4 Gc  
Ex nA IIC T6...T4 Gc  
Ex ic IIIC T95 °C...T125 °C Dc  
IA Certificate No : S-XPL/22.1473 X

*This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:*

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
- ii) Any conditions mentioned in the above report;
- iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- v) A revision certificate replaces all previous versions of the certificate.
- vi) \* - Only covers equipment Imported between the "Issued" and "Expire" dates.
- vii) If and when your QAN (Quality Assurance Notification) or QAR (Quality Assurance Report) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted, the existing IA Certification will then be cancelled. It is thus the Certificate Holder's responsibility to always submit the updated and valid QAN/QAR certificate(s) to Explolabs (Pty) Ltd

**Reviewed by:**



**CC Lourens**

**Technical Specialist**

**EXPLOLABS EXPLOSION PREVENTION SERVICES**

*This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. By marking the equipment in accordance with the documentation/standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and tests have been successfully completed and that the product complies with the documentation and standard(s). The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd*

Product type marking nomenclature:

| Brands<br>1        | Diagnostic variants:<br>2            | Enclosures:<br>3                                         | Spool valve sizes:<br>4                                                                                | Communication:<br>5            | Approval<br>6                          | Options:<br>7                            | Limit switch type:<br>8 |
|--------------------|--------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------|------------------------------------------|-------------------------|
| VG -><br>ValvGuard | 9 -> Intelligent Valve<br>controller | 2 -> Die cast aluminum.<br>alloy<br>3 -> Stainless steel | 12 -> Restricted capacity<br>15-> Standard capacity.<br>35 ->High capacity.<br>37 -> Extended capacity | F -> Foundation Fieldbus<br>H1 | X -> IECEx / ATEX<br>certified product | J -> External Junction<br>box (Table 1.) | Ref. Table 2.           |

Table 1. Option J Junction Box types by International Metal Engineering Pte

|                                                                    |
|--------------------------------------------------------------------|
| IME 7080AM-03-22 or IME 7080TM-03-22 (IECEx SIR 07.0111U Issue 3.) |
| Ex d IIC Gb / Ex tb IIIC Db IP68; Ta = -40°C to +85°               |

Table 2. Optional Inductive Limit Switch types for the certified types:

Note! Limit switch's temperature range and electrical data must be verified from its certificate

| Neles<br>type<br>code | Manufacturer<br>of switch | Type of switch             | ATEX and IECEx certifications of switch | Classification     | Electrical data      |         |         |         |         |
|-----------------------|---------------------------|----------------------------|-----------------------------------------|--------------------|----------------------|---------|---------|---------|---------|
|                       |                           |                            |                                         |                    | Ui (V)               | Ii (mA) | Pi (mW) | Li (μH) | Ci (nF) |
| I02                   | Pepperl+Fuchs             | NJ2-12GK-SN (2 pcs)        | PTB 00 ATEX 2049X                       | IECEx PTB 11.0092X | Ex ia IIC T6...T1 Ga | 16      | 25      | 64      | 150     |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 150     |
| I09                   | Pepperl+Fuchs             | NCB2-12GM35-N0 (2 pcs)     | PTB 00 ATEX 2048X                       | IECEx PTB 11.0037X | Ex ia IIC T6...T1 Ga | 16      | 25      | 64      | 100     |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 100     |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 150     |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 150     |
| I45                   | Pepperl+Fuchs             | NJ3-18GK-S1N (2 pcs)       | PTB 00 ATEX 2049X                       | IECEx PTB 11.0092X | Ex ia IIC T6...T1 Ga | 16      | 25      | 64      | 200     |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 200     |
| I57                   | Pepperl+Fuchs             | NJ2-V3-N (2 pcs)           | PTB 00 ATEX 2032X                       | IECEx PTB 11.0021X | Ex ia IIC T6...T1 Ga | 16      | 25      | 64      | 50      |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 50      |
| I58                   | Pepperl+Fuchs             | NJ2-V3-N (4 pcs)           | PTB 00 ATEX 2032X                       | IECEx PTB 11.0021X | Ex ia IIC T6...T1 Ga | 16      | 25      | 64      | 50      |
|                       |                           |                            |                                         |                    | Ex ia IIC T6...T1 Gb | 16      | 52      | 169     | 50      |
| R02 <sup>1)</sup>     | StoneL                    | Maxx-Guard M, SPDT (2 pcs) | n/a                                     | n/a                | n/a                  | 30      | 100     | 2000    | 800     |
| T01 <sup>1)</sup>     | Neles                     | Position transmitter       | n/a                                     | n/a                | n/a                  | 30      | 120     | 1000    | 100     |

| Tamb                   |        |        |        |
|------------------------|--------|--------|--------|
| Tmin (C)               | T6 (C) | T5 (C) | T4 (C) |
| -40                    | 50     | 64     | 80     |
| -40                    | 50     | 65     | 80     |
| -25                    | 50     | 65     | 80     |
| -25                    | 50     | 65     | 80     |
| -50/-40 <sup>(2)</sup> | 50     | 65     | 80     |
| -25                    | 50     | 64     | 80     |
| -25                    | 50     | 65     | 80     |
| -25                    | 49     | 61     | 80     |
| -25                    | 45     | 60     | 80     |
| -25                    | 49     | 61     | 80     |
| -25                    | 45     | 60     | 80     |
| -40                    | 50     | 65     | 80     |
| -40                    | 45     | 60     | 80     |

<sup>1)</sup> StoneL Maxx-Guard M reed switch proximity sensors (R02 and R03) and Neles Position transmitter (T01) have been assessed for the certified valve controller types in the related ExTR