



**Certificate Number:**  
**Issue:**  
**Expire:**  
**Page:**

MASC M/20-8061X  
04 June 2020  
04 June 2030  
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## IA – CERTIFICATE

**IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT**

Ex – Type Examination

Certificate number:

Equipment:

Serial No:

Applicant:

Address:

**MASC M/20-8061X**

**FP-100 EX, FP-200 EX, FP-500 EX Condensed Aerosol Generator**

(See "Conditions of Certification")

Firepro Systems Ltd

8 Faleas Str.,

Agios Athanasios Industrial Area,

CY-4101 Limassol – Cyprus

Manufacturer:

Address:

Firepro Systems Ltd

8 Faleas Str.,

Agios Athanasios Industrial Area,

CY-4101 Limassol – Cyprus

### DESCRIPTION:

The FP-100/200/500EX units are condensed aerosol generators. The units have cylindrical stainless-steel housings secured with special brackets on the inside of an approved IP Panel or Flameproof enclosure. An FP\*\*\*EX unit will either self-activate when temperatures exceed 300°C or can be remotely activated. The unit incorporates an armoured cable with suitably rated glands. Internal electronics and connections are fully encapsulated. The FPC (patented solid compound contained in the FirePro condensed aerosol generators), immediately starts a chemical reaction that in a few seconds produces condensed dry aerosol in the discharge design application density defined by the system designer (i.e. potassium compounds (K<sub>2</sub>CO<sub>3</sub>), H<sub>2</sub>O, N<sub>2</sub>, CO<sub>2</sub> and other gas particles in small quantities.

**/MARKING...**

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**FP-100EX, FP-200EX, FP-500EX Aerosol Generator**  
(Special Protection)

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**MARKING**

The unit(s) must be identified on the approval label on the outside of the units as follows: The label must be applied in a legible, visible and indelible manner not invalidating the integrity of the enclosure of unit by any means.

<b>Manufacturer:</b>	Firepro Systems Ltd
<b>Supplier:</b>	Firepro Systems Ltd
<b>Model:</b>	FP-100EX, FP-200EX, FP-500EX
<b>Type:</b>	Aerosol Generator
<b>Serial No:</b>	See "Conditions of Certification"
<b>Ex Rating:</b>	Ex s I Mb Ex s IIC T3 Gb Ex s IIIC T200°C Db
<b>Tamb</b>	-54°C to +54°C
<b>I.A. Number</b>	MASC M/20-8061X

**COMPLIANCE:**

The unit / system as described above and in MASC report **20-8061** is hereby certified "Explosion Protected" **Ex s I Mb, Ex s IIC T3 Gb and Ex s IIIC T200°C Db** and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS Standards:

The evaluation was conducted according to the requirements of:

**IEC/SANS 60079 "Electrical Apparatus for Explosive Gas Atmospheres"**

- **Part 0: 2019 "General Requirements"**
- **Part 33: 2013 "Equipment protection by special protection "s"**

Location	Zone 1 & 2	Mining: Underground & (Gas) Surface &
	Zone 21 & 22	(Dust) Surface
Hazard Frequency	---	Intermittent as could occur under normal operating conditions in hazardous area
Environment	Group I	Methane / Coal dust
	Group IIC	Hydrogen/Acetylene
	Group IIIC	Conductive Dusts
Limiting Temperature	150°C	Populated enclosure surface temperature limitation
	T3	Populated enclosure surface temperature limitation
	T200°C	Populated enclosure surface temperature limitation
Ambient Temperature	-54°C to +54°C	

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**The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:**

- i) SANS 10086 requirements;
- ii) Any conditions mentioned in the above report;
- iii) Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv) Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v) Any relevant requirements of the MHS Act or the OHS Act.

**CONDITIONS OF CERTIFICATION:**

**CONDITIONS OF MANUFACTURE:**

- None.

**SPECIAL CONDITIONS OF SAFE USE (X):**

- The unit must be installed in a certified flameproof or IP Panel as applicable.
- The unit must be mounted using the manufacturer's supplied mounting brackets.
- When deployed in an IP panel, the unit must be installed with the outlet pointed downwards.
- The manufacturer's manual must be followed.

**According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory.)**

Approved on behalf of MASC



**D.P. Visser**  
**TECHNICAL SPECIALIST**



**C. Welthagen**  
**TECHNICAL SPECIALIST**

**Mining And Surface Certification**

*This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.*

*While every endeavour is made to ensure that a test / assessment is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test / assessment, MASC or its members/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report issued pursuant to a test / assessment.*

*MASC takes no responsibility for any non-conformances, exclusions or any results / assessments not in compliance with the standards. 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 routine tests have been successfully completed and the product complies with the documentation and standard(s).*

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