GOVERNMENT APPROVED INSPECTION AUTHORITY

Mining And Surface Certification (Pty) Ltd

2015/021934/07

THIS CERTIFICATE IS ISSUED AS AN I.A. CERTIFICATE IN TERMS OF THE MINE HEALTH AND SAFETY ACT, ACT NO 29 OF 1996 (AND REGULATIONS), THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993) AND REGULATION 17 OF THE ELECTRICAL MACHINERY REGULATIONS

IA CERTIFICATE	MASC S/19-8039X	**Issue**	1
Issue Date	30 May 2022	**Expiry Date**	30 May 2025
***Based on Certificate No**	IECEx CML 16.0050X	**Issue / Variations / Amendment**	1
Requested by	ZEST WEG Group, 47 Galaxy Avenue, Linbro Business Park, Sandton, South Africa		
Manufacturer	Ivicta Vibrators, A Division of Grantham Engineering, Harlaxton Road, Grantham, Lincolnshire NG31 75F United Kingdom.		
Description	The Lz, FBLz, BLz, BLTz and CLz Series of industrial rotary electric vibrators have a squirrel cage rotor and wound stator built into a heavy duty enclosure that incorporates features to provide an ingress protection of IP66. The machines are rated at 70 to 14920 W, up to 690 V, 3 phase, 50 or 60 Hz. A larger diameter shaft to minimise deflection and stress is supported by two rolling element bearings that carry the centrifugal loadings generated by a set of out of balance weights fitted to each end of the shaft. The out of balance weights are enclosed under covers that also provides IP66 protection.		
Equipment	Lz, Blz, BLTz, CLz and FBLz Series Rotary Electric Vibrators		
MARKING: **Original marking as per certificate ** remains applicable.** **IA number must be added.**	**Type** **Ex Marking** **IA Number** **Warnings**	Lz, Blz, BLTz, CLz and FBLz Ex tb IIIC T**_°C Db IP66 (**As Defined on the manufacture's documentation) Ta -20°C to 50°C (Model: CLzl80-95/8) Ta -20°C to 40°C (All other models) MASC S/19-8039X See Base Certificate * and original marking	

Compliance:

The equipment as described above has been allocated the rating Explosion Protected 'as above' utilizing the SANS/IEC Standards:

- SANS (IEC) 60079-0 2012 General requirements
- SANS (IEC) 10086-31 2014 Equipment dust ignition protection by enclosure "t"

Note: This certificate covers only the listed standards and does not imply compliance to any other standard, related or inferred. It is up to the manufacturer to ensure that the product complies to all relevant standards for the application.

Special conditions of safe use "X":

- See "Annex A" below

Conditions of manufacture:

- See "Annex A" below

F. van Wyk
TECHNICAL OFFICER

M. Erasmus
TECHNICAL SPECIALIST

This certificate covers all units sold as long as the QAR/QAN remains valid.
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).

Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:
SANS 10086 requirements;
Any conditions mentioned in the above certificate;
Any relevant requirements of the MHS Act;
Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).

Mining And Surface Certification (Pty) Ltd
Unit 5 Lelyta Park, 45 Jurg Avenue, Hennopspark, Ext 87
Centurion 0157

ANNEX A

This document is based on and must be read in conjunction with certificate **IECEx CML 16.0050X**	
Description (According to Base Certificate) **	
Standard compliance	See Base Certificate *
Special conditions of safe use ("X")	**Specific to Variable Frequency Drives** • The user is advised that this equipment is fitted with thermistors, RTDs or thermostats, therefore, when a vibrator is fed from a variable speed drive, it shall be connected to a suitable controlling and regulating device, as defined in article 1(b) of European Directive 2014/34/EU, and when located in hazardous area, shall be covered / protected by an appropriate EC / EU Type Examination Certificate [depending upon when the product was placed on the market]. • Frequency limits, are defined in the associated manufacturers manual. • The effectiveness of the temperature controlling system shall be verified and documented in accordance with IEC 60079-14:2013. **Specific to Machine Orientation** • The user is advised that this equipment is fitted with thermistors, RTDs or thermostats, when a vibrator is mounted in any other orientation than horizontal, it shall be connected to a suitable controlling and regulating device, as defined in Article 1(b) of European Directive 2014/34/EU, and when located in a hazardous area, shall be covered / protected by an appropriate EC / EU Type Examination Certificate [depending upon when the product was placed on the market]. • Frequency limits, are defined in the associated manufacturers manual. • The effectiveness of the temperature controlling system shall be verified and documented in accordance with IEC 60079-14:2013. • This condition does not apply to the smaller vibrators in the Invicta range from BLz03 up to BLz25, fitted with ball bearings, which may be installed in other orientations without a temperature controlling system. • It is the end user's responsibility to install and fit the pneumatic force wheel assemblies in line with the manufacturer's instructions for the CLz80-95/8 motor. Along with the use of a suitably certified connector providing an ingress protection rating of IP66 and a minimum of 5 full threads for engagement in accordance with IEC 60079-31:2013, Clause 5.3.2. • It is the end user's responsibility to install a suitably certified cable glands having sealing rings with a minimum service temperature of 132°C with the CLz80-95/8 vibrator motor. • The CLz80-95/8 (8-pole) industrial rotary electric vibrator motor is suitable for an ambient temperature range of -20°C to +50°C, other models are suitable for an ambient temperature range of -20°C to +40°C only.
Conditions of manufacture	• Holders of EU-Type Examination certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU. • Vibrator motor silicone rubber O-rings and gaskets shall only be secured with a silicone sealant having a continuous operating temperature range temperature of at least -20°C, and 20°C higher than the maximum surface temperature intended to be marked on the product (which differs dependent upon the model designation). • Converter-fed electrical machines shall additionally be marked in accordance with IEC 60079-0:2011 Clause 29.15.
Conditions of Certification	• This IA Certificate covers all units sold from the date of this document to the expiry date of this certificate. • As per ARP 0108 a maximum three yearly review is required on this IA Certificate (expiry is determined as per the QAR/QAN/QMS expiry date). • The apparatus must be additionally marked with the MASC marking details above. • This approval only covers the equipment as certified above and does not include any scheduled additions or variations / amendments / new issues to the certificate(s), made after the above date. • The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by the certificate on which this IA Certificate is based and any other conditions in this IA Certificate. • The certification on which this IA Certificate is based must remain valid. • The extent of the requirements in the ARP 0108 (or regulations), SANS 10108 and any other applicable regulations on the certification of the equipment must remain unchanged. • The Ex quality assurance notification/report for the equipment must remain valid.

Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07
Directors: Roelof Viljoen & Francoius du Toit
Unit #5, Lelyta Park, 45 Jurg Avenue, Hennopspark Ext 87, Centurion, 0157
P.O. Box 14344, Clubview, 0014
Tel: 012 653 2959 ◊ Fax: 086 605 8568
e-mail: **info@masc-ex.co.za**

Conclusion:	• From the above and the selective examination of the documentation, nothing contrary to the requirements of the applicable standards was found, provided that the equipment / component is used as described in the above document / certificate and according to the MASC conditions below. A MASC IA certificate is issued based on the work done as per the Base Certificate *. • The routine tests for production units according to the Base Certificate * must be complied with (if applicable).

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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 CML 16.0050X**

Certificate history:
Issue 0 (2016-07-09)

Status: **Current**

Issue No: 1

Date of Issue: 2020-12-22

Applicant: **Invicta Vibrators, A Division of Grantham Engineering**
Harlaxton Road
Grantham
Lincolnshire NG31 75F
United Kingdom
United Kingdom

Equipment: **Lz, BLz,BLTz, CLz and FBLz Series Rotary Electric Vibrators**

Optional accessory:

Type of Protection: **Dust ignition protection**

Marking: Ex tb IIIC T**_°C Db IP66 (**As defined on the manufacture's documentation)

Ta -20°C to 50°C (Model: CLz180-95/8)

Ta -20°C to 40°C (All other models)

Approved for issue on behalf of the IECEx Certification Body: **A Snowdon MIET**

Position: **Assistant Certification Manager**

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

IECEx Certificate of Conformity

Certificate No.: **IECEx CML 16.0050X**

Date of issue: 2020-12-22 Issue No: 1

Manufacturer: **Invicta Vibrators, A Division of Grantham Engineering**
Harlaxton Road
Grantham
Lincolnshire NG31 75F
United Kingdom
United Kingdom

Manufacturing locations:

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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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 Reports:

GB/CML/ExTR16.0091/00 GB/CML/ExTR20.0259/00

Quality Assessment Report:

GB/CML/QAR16.0007/03

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Lz, BLz, BLTz, CLz and FBLz Series Rotary Electric Vibrators. The industrial rotary electric vibrators have a squirrel cage rotor and wound stator built into a heavy duty enclosure that incorporates features to provide an ingress protection of IP66.

See Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to certificate Annex for Specific Conditions of Use

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following modifications:

1. Addition of the FBLz40-27/6 (L/406/0/3313) and FBLz40-25/6 (L/406/0/3370) motors.

2. Change to the location of a marked warning.

Annex:

IECEx CML 16.0050X Annex Iss 1.pdf

Annexe to:	**IECEx CML 16.0050X Issue 1**
Applicant:	**Grantham Engineering Limited, Invicta Vibrators**
Apparatus:	**The Lz, FBLz, BLz, BLTz, and CLz Series Rotary Electric Vibrators**

Description

The Lz, FBLz, BLz, BLTz, and CLz Series of industrial rotary electric vibrators have a squirrel cage rotor and wound stator built into a heavy duty enclosure that incorporates features to provide an ingress protection of IP66.

The machines are rated at 70 to 14920 W, up to 690 V, 3 phase, 50 or 60 Hz. A large diameter shaft to minimise deflection and stress is supported by two rolling element bearings that carry the centrifugal loadings generated by a set of out of balance weights fitted to each end of the shaft.

The out of balance weights are enclosed under covers that also provide IP66 protection.

Conditions of Manufacture

The following are conditions of manufacture

i. Holders of EU-Type Examination certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

ii Vibrator motor silicone rubber O-rings and gaskets shall only be secured with a silicone sealant having a continuous operating temperature range temperature of at least -20°C, and 20°C higher than the maximum surface temperature intended to be marked on the product (which differs dependent upon the model designation).

iii Converter-fed electrical machines shall additionally be marked in accordance with IEC 60079-0:2011 Clause 29.15.

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Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment:

i. **Specific to Variable Frequency Drives**

The user is advised that this equipment is fitted with thermistors, RTDs or thermostats, therefore, when a vibrator is fed from a variable speed drive, it shall be connected to a suitable controlling and regulating device, as defined in article 1(b) of European Directive 2014/34/EU, and when located in hazardous area, shall be covered / protected by an appropriate EC / EU Type Examination Certificate [depending upon when the product was placed on the market].

Frequency limits, are defined in the associated manufacturers manual.

The effectiveness of the temperature controlling system shall be verified and documented in accordance with IEC 60079-14:2013.

ii **Specific to Machine Orientation**

The user is advised that this equipment is fitted with thermistors, RTDs or thermostats, when a vibrator is mounted in any other orientation than horizontal, it shall be connected to a suitable controlling and regulating device, as defined in Article 1(b) of European Directive 2014/34/EU, and when located in a hazardous area, shall be covered / protected by an appropriate EC / EU Type Examination Certificate [depending upon when the product was placed on the market].

Frequency limits, are defined in the associated manufacturers manual.

The effectiveness of the temperature controlling system shall be verified and documented in accordance with IEC 60079-14:2013.

This condition does not apply to the smaller vibrators in the Invicta range from BLz03 up to BLz25, fitted with ball bearings, which may be installed in other orientations without a temperature controlling system.

iii It is the end user's responsibility to install and fit the pneumatic force wheel assemblies in line with the manufacturer's instructions for the CLz80-95/8 motor. Along with the use of a suitably certified connector providing an ingress protection rating of IP66 and a minimum of 5 full threads for engagement in accordance with IEC 60079-31:2013, Clause 5.3.2.

iv It is the end user's responsibility to install a suitably certified cable glands having sealing rings with a minimum service temperature of 132°C with the CLz80-95/8 vibrator motor.

v The CLz80-95/8 (8-pole) industrial rotary electric vibrator motor is suitable for an ambient temperature range of -20°C to +50°C, other models are suitable for an ambient temperature range of -20°C to +40°C only.