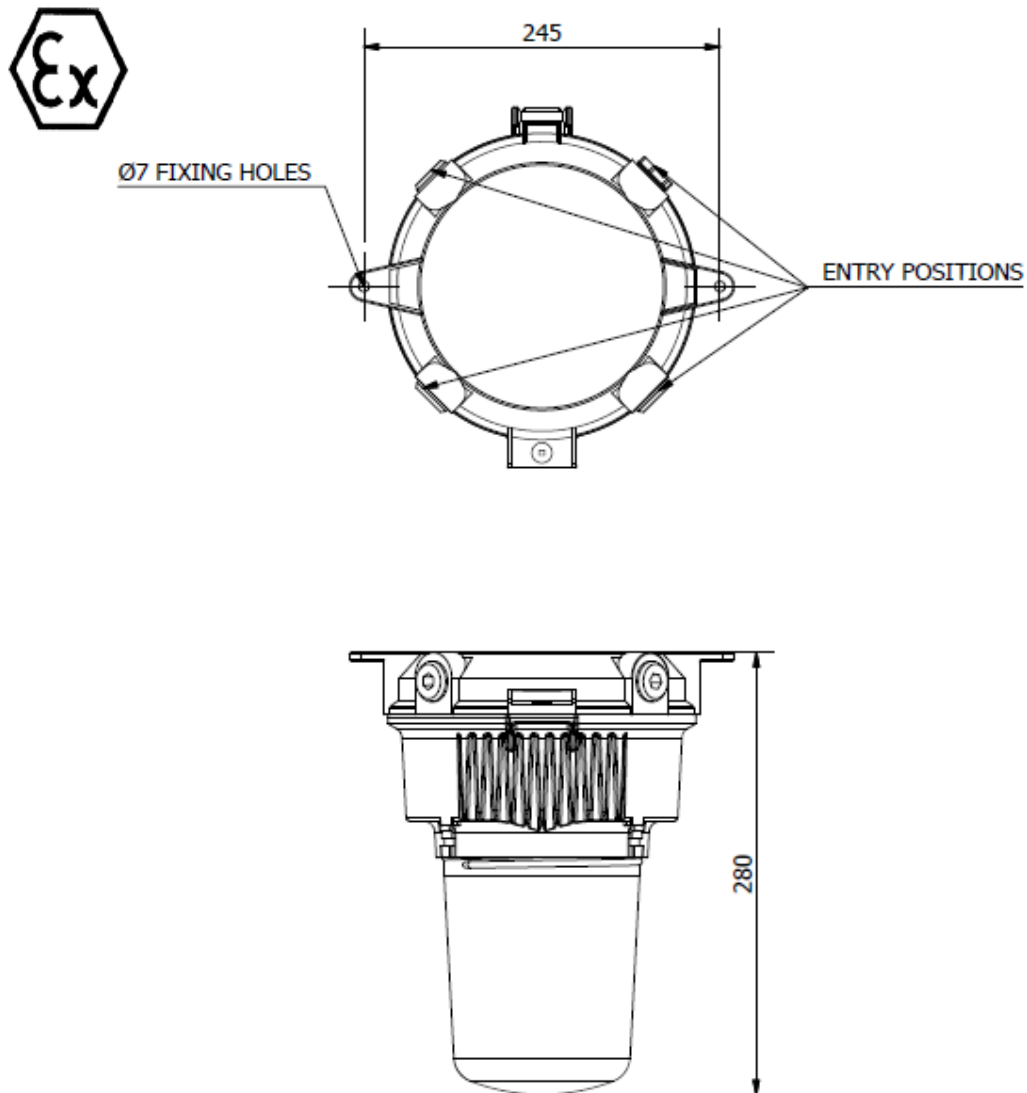



# Eclipse II Junior LED- Wellglass Luminaires (Ex ec)

## INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

**Important:** Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.



<b>0.0 Specification</b>	
Type Of Protection	Ex ec Ex tc (dust)
Protection Standards	IEC 60079-0, (IEC) EN 60079-7, (IEC) EN 60079-31.
Area Classification	Zone 2 areas to (IEC) EN 60079-10-1, Zone 22 areas to (IEC) EN 60079-10-2.
Installation	EN 60079-14
Certificate	IECEX Certificate of Conformity IECEX BAS 18.0043X Type Examination Certificate Baseefa18ATEX0062X
Equipment Coding	Ex ec IIC T* Gc Ex tc IIIC T90°C Dc IP66 (Tamb -40°C to **°C see table 1 for details)
ATEX Coding	Ⓜ II 3GD
Ingress Protection	IP66 to EN 60529
CE Mark	 <p>The CE marking of this product applies to "The Electrical Equipment (Safety) Regulations 2006", "The Electromagnetic Compatibility Regulations 2004", the "Waste Electrical and Electronic Equipment Regulations 2006" and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Regulations 1996". [This legislation is the equivalent in UK law of EU directives 2014/35/EU, 2014/30/EU, 2012/19/EU and 2014/34/EU respectively].</p> <p>The Equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the Type Examination and compliance with the Essential Health and Safety Requirements. M Poutney Technical Manager</p>

**SPECIAL CONDITIONS FOR SAFE USE**

When reflectors are installed please be aware:  
Warning: Electrostatic charging hazard, Clean only with a damp cloth.

**10 Introduction – Eclipse II Junior LED Wellglass**

This installation leaflet describes the Eclipse II range of (IEC) ATEX compliant Category 3 Zone 2 wellglass luminaires. The Eclipse Junior II is manufactured from painted corrosion resistant aluminium alloy with a toughened glass Globe and silicone rubber gaskets. The integral control gear and LED's are contained within an IP66 enclosure and is classified as Ex ec

**1.1 Application**

The luminaire is designed to be safe in normal operation; type Ex ec luminaires should not be operated in an ambient temperature in excess of the rated ambient even for a short period.

The luminaire should not be used in conditions where there are environmental, vibration or shock conditions above the normal for fixed installations.

The gaskets should not be exposed to hydrocarbons in liquid or high concentration vapour states.

The luminaire is suitable for applications where Category 3 apparatus is used. The application is for ignitable gas atmospheres and the presence of combustible dust. The (IEC) ATEX type examination does not address suitability for portable applications.

The presence of certain chemicals in the explosive atmosphere may cause a chemical reaction with non-metallic materials such as the polycarbonate diffuser and silicone gaskets that could have detrimental effect on their performance. Chemical compatibility is highly dependent on concentration, temperature, humidity and other environmental conditions. The end user will assume responsibility for evaluation of gaseous or direct contact compatibility at their site prior to product installation. If in doubt please contact Chalmit sales.

Table 1 Minimum/Maximum Ambient and Temperature Ratings

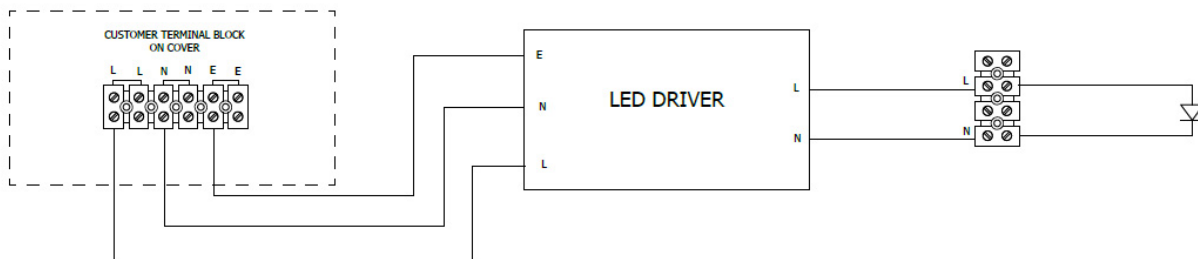
CHALMIT MODEL NUMBER	WATTS	Hz	VOLTS	AMPS	T* CLASS AT +40°C	T* CLASS AT +55°C
ECJN/05L/LE/**	44	50/60	110-277Vac	0.4 - 0.16	T5	T4

**Power factor** ≥ 0.90 at 110Vac-277Vac, 100% Load

**Terminals** 6mm<sup>2</sup> as standard, looping has current limit of 16A.

**Tamb Storage** -40°C to +80°C

**Storage** Luminaires should be stored in cool dry conditions preventing ingress of moisture and condensation



### 3.0 Installation and Safety

#### 3.1 General

There are no health hazards associated with this product whilst in normal use. However, care should be exercised during the following operations. Installation should be carried out in accordance with *EN(IEC) 60079-14* or the local hazardous area code of practice, whichever is appropriate, and fitting of specified insulating material to be adhered to where a specific fire resistance rating is required.

In the UK, the requirements of the '*Health and Safety at Work Act*' must be met.

Handling and electrical work associated with this product to be in accordance with the '*Manual Handling Operations Regulations*' and '*Electricity at Work Regulations, 1989*'. Your attention is drawn to the paragraphs

- (i) 'Electrical Supplies',
- (ii) 'Electrical Fault Finding and Replacement' and
- (iii) 'Inspection and Maintenance'. The luminaires are Class 1 and should be effectively earthed.

The luminaires are quite heavy and suitable means of handling on installation must be provided.

Maximum Insulation Resistance Test 500V dc.

Guards and External Reflector can be supplied with or fitted retrospectively, the guard is to protect glass if there is a higher than normal risk of mechanical damage. The guard and External Reflector cannot be fitted together.

This LED Floodlight luminaire has passed thermal shock testing during certification, it is still advisable to mount the Floodlight in locations to reduce the possibility of thermal shock.

Certification details on the rating plate must be verified against the application requirements before installation.

The information in this leaflet is correct at the time of publication. The company reserves the right to make specification

### 3.1.1 Use in Combustible Dust Atmospheres

Where the equipment is used in ignitable dust atmospheres reference must be made to the selection and installation standards in order that the equipment is used correctly. In particular this applies to the de-rating of surface temperature for use where dust clouds may be present. Dust layers should not be allowed to accumulate on the fitting surface and good housekeeping is required for safe operation. As the build up of the dust layer can never be guaranteed not to occur. The temperature on the glass is the hottest point on the luminaire and any obstruction of the radiation from the luminaire would cause the surface temperature to increase. Dust in layers has the potential to form ignitable clouds and to burn at lower temperatures.

*Refer to (IEC) EN 60079-10-2 and (IEC) EN60079-14 for additional details of selection, installation and maintenance.*

### 3.1.2 Hybrid Mixtures – Gas and Dust

Where Hybrid mixtures exist as defined in EN1127-1 as a potentially explosive atmosphere, consideration should be given to verifying that the maximum surface temperature of the luminaire is below the ignition temperature of the hybrid mixture.

### 3.2 Tools

Strap wrench, 3mm and 5mm flat blade screwdriver.

Pliers, knife, wire strippers/cutters.

A spanner suitable for fitting cable glands.

### 3.3 Electrical Supplies

The supply voltage and frequency should be specified when ordering a maximum voltage variation of +6%/-6% on the nominal is expected. (The safety limit for T rating is +10%). Luminaires should not be operated continuously at more than +6%/-10% of the rated supply voltage of the control gear. The user must determine the **actual** underlying site supply and purchase or adjust accordingly.

### 3.4 Mounting

Luminaires should be installed where access for maintenance is practical and in accordance with any lighting design information provided for the installation. The luminaire is designed to operate at up to an angle of 25° from the vertically down position. The wall mounting or ceiling mounting arrangements should be secured with lock washers or self-locking nuts and bolts. The pole mounting version must be mounted so as to maintain the IP rating.

#### 3.4.1 Fitting the Globe

Care must be taken when fitting the Globe, due to the lamp enclosure being classified as restricted breathing. The following steps must be taken:

- 1 Apply silicone grease to the threads of the Globe.
- 2 Rotate the Globe in the threaded collar until the Globe seals onto the gasket.
- 3 Rotate the Globe until tight; it may be necessary to use a strap wrench to perform this task.
- 4 Secure the Globe using the screw.

### 3.5 Cabling and Cable Glands

#### 3.5.1 Cables

The cable entry temperatures are given as the rise over the maximum rated ambient temperature refer to Table 1. This allows the user to adjust the cable specification for actual site maximum temperature. The standard conductor section is 6mm<sup>2</sup> max. All models are suitable for looping.

### 3.5.1 Cable Glands

Cable glands for entry into Ex enclosures when fitted with any gland to body sealing method and supply cable, must reliably maintain the IP rating of the enclosure. Nylon washers are provided with the unit to seal between the gland body and the luminaire. The cable glands must be suitable for Zone 2 applications, or the appropriate European Standard for industrial cable entries and cable entry devices. Plastic cable glands must have hazardous area component approval. Where brass cable glands are used nickel plating should be used. Sealing plugs for unused entries should be similarly rated and fitted. Entries suitable for M20 cable glands are standard. Entries suitable for M25 are available to special order. Cable glands and sealing plugs must have (IEC) ATEX approval or be certified to (IEC) EN60079-0.

### 3.6 Inspection and Maintenance

Visual inspection should be carried out at a minimum of 12 monthly intervals and more frequently if conditions are severe. The time between lamp changes could be very infrequent and this is too long a period without inspection.

### 4.0 Inspection and Maintenance

Individual organisations will have their own procedures for inspection and maintenance. What follows are guidelines based on *EN/IEC 60079-17* and on our experience. Maintenance work and fault finding must be performed by competent personnel under an appropriate permit to work and with the apparatus isolated. Frequency of maintenance will depend on experience and the operating conditions.

**Luminaire should not be opened when an explosive atmosphere is present.**

- 1 Check if any LED's have failed (not lit).
- 2 The LEDs are mounted on boards, if there is 3 or more LED's not working on one board the light output will have dropped to a level where the LED board may need replaced. Refer to **4.2 LED Replacement**.
- 3 Check for mechanical damage/corrosion.
- 4 Check for loose connections including earthing.
- 5 Check for undue accumulations of dust or dirt.
- 6 Verification of tightness of fixing, glands, blanking plugs etc.
- 7 Check for unauthorised modifications.
- 8 Check condition of enclosure gaskets and fastenings.
- 9 Check for any accumulation of moisture.
- 10 Clean the lampglass.
- 11 Check that mountings are secure.
- 12 If there is suspicion that the luminaire has suffered mechanical damage, a stringent workshop check should be made.

**Important:** *Where spares are needed, these must be replaced with manufacturer parts. No modifications should be made without the knowledge and approval of the manufacturer.*

#### 4.1 Electrical Fault Finding and Replacement

Any fault finding must be done by a competent electrician with the luminaire isolated and if carried out with the luminaire in place, under a permit to work. Fault finding is by substitution with known good components.

#### 4.2 LED Replacement.

The need and frequency of replacing LED's be dependent on the functionality of the fitting. If it is continually running at high ambient temperatures it will affect the frequency of LED replacement. If it is necessary to replace the LED's, the LED's are mounted on boards that can be replaced individually. (The boards with LED's supplied by Chalmit ). Remove cover assembly.

Removal of LED assembly is as follows:

1. Unscrew 2 off screws that secure the board to the casting.
2. Carefully lift the plate and disconnect push in wiring.

### 4.3 Overhaul

The unit is largely made of materials that are very corrosion resistant. This allows the unit to be completely stripped, cleaned, and then re-built with new electrical parts as required. The internal wiring is 1.0mm<sup>2</sup> flexible, silicone rubber insulated. All the spares required are available. Please state the model number, LED and optical details. The seal at the end cover is held within a groove by silicone R.T.V. The Globe gasket is similarly held in place by RTV.

If the gaskets have deteriorated by softening or permanent set, new gaskets should be fitted, which can be obtained from Chalmit. To fit the gasket, the old gasket should be removed and remaining RTV scraped off. The gasket is fixed in place and joined with silicone R.T.V. to the body.

### 5.0 Disposal of Material

The unit is mostly made from incombustible materials. The control gear contains plastic parts and polyester resin. All electrical components and the body parts may give off noxious fumes if incinerated. Take care to render these fumes harmless or avoid inhalation. Any local regulations concerning disposal must be complied with. Any disposal must satisfy the requirements of the WEEE directive [2012/19/EU] and therefore must not be treated as commercial waste. The unit is mainly made from incombustible materials. The control gear contains plastic, resin and electronic components. All electrical components may give off noxious fumes if incinerated.

*Certification body SGS Baseefa-performed Type examination in accordance with Annex III of the directive in support of the manufacturer Declaration of Conformity and issued the voluntary certificate: Baseefa18ATEX0062X.*

*SGS Baseefa performed Conformity to type based on quality assurance of the production process in accordance with Annex IV of the directive and has included this product on a voluntary basis in the QA Notification document: Baseefa18ATEX 0062*

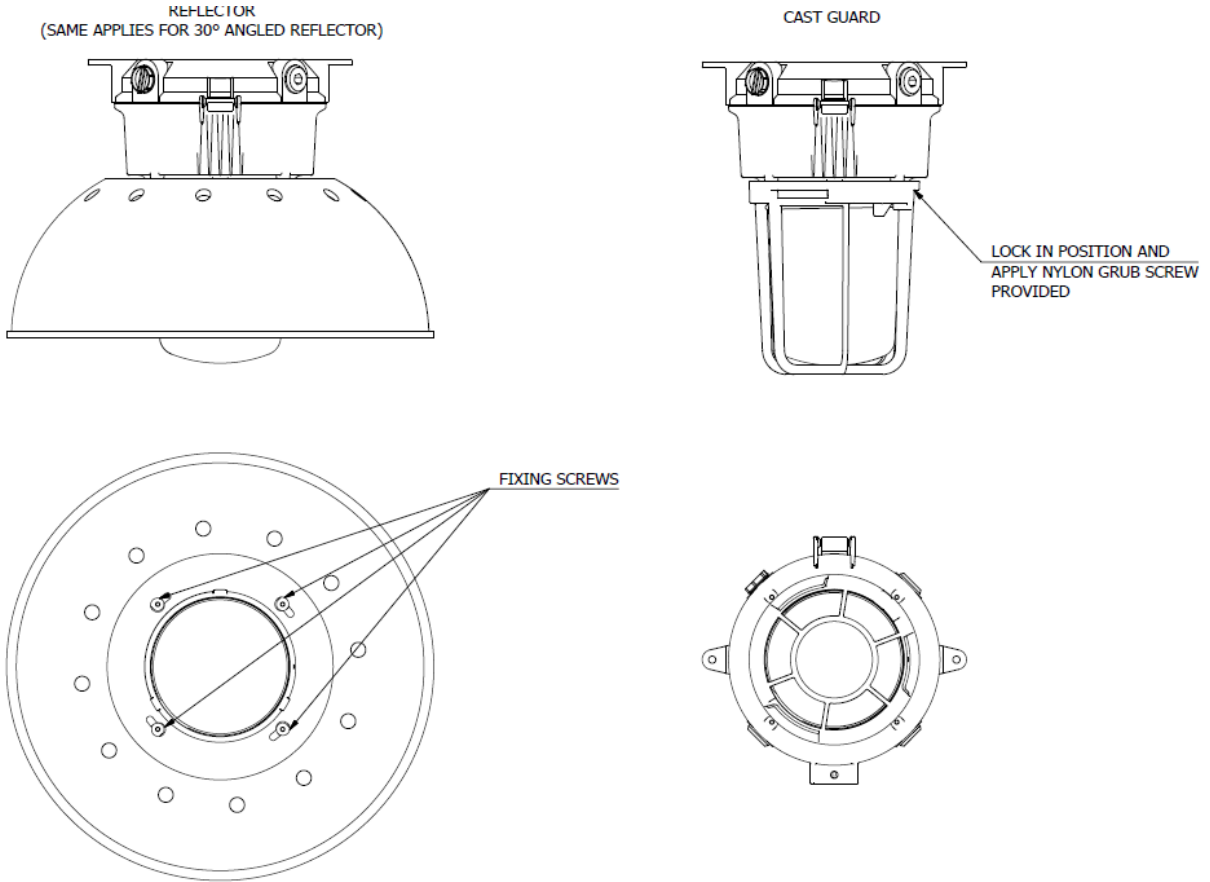


To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.


**Directions for Installation of Accessories**

**WARNING:** Ensure the supply circuit is off before starting installation.

To install reflector, carefully remove the 4 screws provided in housing that align with the locations of the holes on the reflector and retain the screws. Place the reflector into position, lining up the holes in the reflector with the holes on the lens housing. Reinstall the removed 4 screws into the existing hole location, and tighten to secure.





**Chalmit Lighting is a leading supplier of Hazardous Area lighting products**

	<p><b>CHALMIT LIGHTING</b> PO Box 5575 Glasgow, G52 9AP Scotland</p>	
<p>Telephone: +44 (0) 141 882 5555 Fax: +44 (0) 141 883 3704 Email: info@chalmit.com Web: www.chalmit.com</p>	<p>Registered No: 669157 Registered Office: Cannon Place 78 Cannon Street London EC4N 6AF UK</p>	

**For technical support, please contact: techsupport@chalmit.com**

Note: Chalmit Lighting reserves the right to amend characteristics of our products and all data is for guidance only.

	<b>EU-Declaration of conformity</b>		
	<b>UE-Déclaration de conformité</b>		
	<b>EU-Konformitätserklärung</b>		
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK
Product	Eclipse II Junior LED Luminaire.		
Type Examination Certificate	Baseefa18ATEX0062X		
Notified Body	SGS Fimko OY 0598		
ATEX Coding	 II 3 GD	ATEX Classification	Group II Category 3 GD
Equipment Coding	Ex ec IIC T* Gc Ex tc IIIC T90°C Ta - 40°C to +55°C Dc IP6X		
Ingress Protection	IP66		
The technical basis, with respect to equivalence of			
La base technique, en ce qui concerne l'équivalence de			
Die technische Grundlage hinsichtlich der Normen			
Protection Standards IEC60079-0, EN60079-7, EN 60079-31			
Area Classification EN 60079-10-1, EN 60079-10-2.			
of compliance with the EHSRs is valid as there are no changes which materially affect the state of technological progress of the product.			
en conformité avec les EESS est valide puisqu'il n'y a aucun changement qui affecte matériellement l'état de l'évolution technologique du produit.			
zur Erfüllung der GSGA ist gegeben, da keine Änderungen erfolgt sind, die einen Einfluss auf den technischen Stand des Produkts haben.			
Terms of the directive:		Standard & Date Certified to	Standards Date Declared to
Prescription de la directive:		Standard & date certifiée à	Normes date Déclaré
Bestimmungen der Richtlinie:		Standard & Datum Zertifiziert nach	Standards Datum erklärt
2014/34/EU	Equipment and protective systems intended for use in potentially explosive atmospheres.	IEC 60079-0: 2017 Ed 7 EN 60079-7: 2015	
2014/34/UE	Appareils et les systèmes de protection destinés à être utilisés en atmosphères potentiellement explosibles.	EN 60079-31: 2014	
2014/34/EU	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsfähigen Bereichen.		
2014/30/EU	Electromagnetic compatibility	EN 55015 : 2013	
2014/30/UE	Compatibilité électromagnétique	EN 61547 : 2009	
2014/30/EU	Elektromagnetische Verträglichkeit	EN 61000-3-2 : 2014	
2014/35/EU	Low voltage equipment	EN 60598-1 : 2015	
2014/35/UE	Équipements électriques à bas voltage	EN 60598-2-5 : 2015	
2014/35/EU	Niederspannungsgeräte / -systeme	EN 60529 : 1992	
2012/19/EU	Waste of electrical and electronic equipment		
2012/19/UE	Déchets d'équipements électriques et électroniques		
2012/19/EU	Entsorgung der elektrischen und elektronischen Geräte / Systeme		
2011/65/EU	RoHS II Directive		





On behalf of the Chalmit, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms to all technical and regulatory requirements of the above listed directives.

En tant que représentant du fabricant Chalmit, je déclare qu'à la date où les équipements accompagnant cette déclaration sont mis sur le marché, ceux-ci sont conformes à toutes les dispositions réglementaires et techniques des directives énumérées ci-dessus.

Hiermit bestätige ich, im Namen von Chalmit, dass am Tag der Lieferung des Produkts/der Produkte zusammen mit dieser Erklärung das Gerät/die Geräte alle technischen und regulativen Anforderungen der oben aufgeführten Direktiven erfüllt.

Name and Date      Mark Poutney    01/01/2021  
Nom et Date  
Name und Datum

Technical Manager  
Directeur technique  
Technischer Leiter

Quality Assurance Notification by:      **SGS Fimko OY**  
Notification d'assurance qualité par:    **0598**  
Qualitätssicherungsnotifikation durch:

Quality Management System Accreditation:  
Système de Management Qualité Accréditation:  
Qualitätsmanagementsystem Akkreditierung:  
Environmental Management System.  
Système de gestion de l'environnement.  
Umwelt kontroll system.  
**Certificate No./Certificat N°/Zertifikat Nr.**

**ISO 9001**

**ISO 14001**  
by/par/durch  
**Lloyd's Register**  
**LRQ 4005876**