

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Gland**

with type designation(s)

A2, CW, CX/Z, E1U, E1W, E1X/Z, IPLUS CORROSION GUARD, POSI FLEX

Issued to

CCG Cable Terminations (Pty) Ltd.**KEMPTON PARK, South Africa**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Cable glands for electric installation.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**

Material	Metal
Suitable for open deck	Yes
Suitable for Hazardous areas	No

Issued at **Høvik** on **2021-01-11**for **DNV GL**This Certificate is valid until **2025-10-13**.DNV GL local station: **Newcastle-upon-Tyne**Approval Engineer: **Nicolay Horn****Marta Alonso Pontes**
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **262.1-019235-2**
 Certificate No: **TAE000000Z**
 Revision No: **1**

Product description

Cable glands for electric installation

Type	A2 (LSOH) (EMC) (IE)
Application	The A2 cable gland is used to terminate unarmoured cables into enclosures. It has a seal that acts against the cable sheath. The A2 cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Variants	LSOH – Fitted with Low Smoke, Zero Halogen seals. EMC – Fitted with an internal earthing washer. IE – Fitted with an external earth stud.
Operating temperature	-65°C to +120°C (to +175°C with high temperature seals)
Ingress protection	IP66, IP67, IP68
Gland material	Brass (marine grade nickel plated), Stainless steel or aluminium
Seal material	Thermoset elastomer (silicone for high temperature seals)
Gland sizes	16ss, 20ss, 20s, 20, 25s, 25, 32s, 32, 40s, 40, 50s, 50, 63s, 63, 75s, 75, 80, 90s, 90, 100, 110, 120, 130
Data sheet	0535A2_IN010518, 0552A2LSOH_LS010518E,
Assembly drawing No.	053500-053513-S RANGE Rev 1

Type	CW (LSOH) (INS)(IE)
Application	The CW cable gland is used to terminate armoured cables into enclosures with threaded entries, or unthreaded entries where the gland is secured with a locknut. The CW cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Variants	LSOH – Fitted with Low Smoke, Zero Halogen seal. INS – Fitted with an insulator to give electrical isolation. IE – Fitted with an Integrated Earth stud.
Operating temperature	-20° C to +125° C (to +175°C with high temperature seals)
Ingress protection	IP66
Gland material	Brass (marine grade nickel plated), Stainless steel or aluminium
Seal material	Thermoset elastomer (silicone for high temperature seals)
Gland sizes	16ss, 20ss, 20s, 20, 25s, 25, 32s, 32, 40s, 40, 50s, 50, 63s, 63, 75s, 75, 80s, 80, 90s, 90, 100, 115, 120, 130.
Data sheet	GI050614E
Assembly drawing No.	E.00.00.06.000

Type	CX / Z (INS)
Application	The CX / CZ cable gland is used to terminate braided and steel tape armoured cables into enclosures with threaded entries, or unthreaded entries where the gland is secured with a locknut. The CX / CZ cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Variants	INS – Fitted with an insulator to give electrical isolation.
Operating temperature	-20° C to +125° C
Ingress protection	IP66
Gland material	Brass (marine grade nickel plated), Stainless steel or aluminium
Seal material	Thermoset elastomer (silicone for high temperature seals)
Gland sizes	20ss, 20s, 20, 25, 32, 40, 50, 63, 75, 80, 90.
Data sheet	GI090914E
Assembly drawing No.	051300-051309

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Type	E1U
Application	The E1U cable gland is used to terminate SWA, braid or tape armoured cables into enclosures with threaded entries or unthreaded entries where the gland is secured with a locknut. It has seals that acts against both the inner and outer sheaths of the cable. The E1U cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Variants	None
Operating temperature	-65°C to +120°C (to +175°C with high temperature seals)
Ingress protection	IP66, IP67, IP68
Gland material	Brass (marine grade nickel plated), Stainless steel or aluminium
Seal material	Thermoset elastomer (silicone for high temperature seals)
Gland sizes	16ss, 20ss, 20s, 20, 25s, 25, 32s, 32, 40s, 40, 50s, 50, 63s, 63, 75s, 75, 80, 90s, 90, 100
Data sheet	0508E1U_IN010518E
Assembly drawing No.	0508-ASSY_00

Type	E1W (LSOH)(VS) (INS)(IE)
Application	The E1W cable gland is used to terminate armoured cables into enclosures with threaded entries, or unthreaded entries where the gland is secured with a locknut. It has seals that act against both the inner and outer sheaths of the cable. The E1W cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Variants	LSOH – Fitted with Low Smoke, Zero Halogen seals. VS – Fitted with an internal electrical continuity disc so that the gland can be used with cables that have copper tape screening or Lead bedding. INS – Fitted with an insulator to give electrical isolation. IE – Fitted with an Integrated Earth stud.
Operating temperature	-20° C to +125° C (to +175°C with high temperature seals)
Ingress protection	IP66, IP67 IP68
Gland material	Brass (marine grade nickel plated), Stainless steel or aluminium
Seal material	Thermoset elastomer
Gland sizes	16ss, 20ss, 20s, 20, 25, 32, 40, 50, 63, 75, 80, 90, 100, 115, 120, 130.
Data sheet	GI121014E 0528E1WLSOH_LS010518E, 0558E1WINS_SE010518E, 0518E1WIE_SE010518E,
Assembly drawing No.	051800 - 051813_01 / 052800 - 052813_00

Type	E1X/Z
Application	The E1X/Z cable gland is used to terminate braided and steel tape armoured cables into enclosures with threaded entries, or unthreaded entries where the gland is secured with a locknut. It has seals that act against both the inner and outer sheaths of the cable. The E1X/Z cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Operating temperature	-20° C to +125° C C (to +175°C with high temperature seals)
Ingress protection	IP66, IP67 IP68
Gland material	Brass, nickel plated brass, stainless steel or aluminium
Seal material	Thermoset elastomer (silicone for high temperature seals)
Gland sizes	20ss, 20s, 20, 25, 32, 40, 50, 63, 75, 80, 90.
Data sheet	0517E1XZ_IN010518E
Assembly drawing No.	0517-ASSY_00

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Type	IPLUS CORROSION GUARD
Application	The IPLUS CORROSION GUARD cable gland is used to terminate armoured cables into enclosures with threaded entries or unthreaded entries where the gland is secured with a locknut. It is intended for use in highly corrosive and wet locations. It has two seals that acts against the cable sheath. The IPLUS CORROSION GUARD cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Operating temperature	-20° C to +125° C
Ingress protection	IP66, IP67 IP68
Gland material	Nickel plated brass with a glass reinforced polyester (PBT) outer body.
Seal material	Thermoset elastomer
Gland sizes	16ss, 20ss, 20s, 20, 25, 32, 40, 50, 63, 75.
Data sheet	0546IPLUS_CP150818
Assembly drawing No.	0546-ASSY_00

Type	POSI FLEX
Application	The POSI FLEX cable gland is used to terminate unarmoured cables into with threaded entries or unthreaded entries where the gland is secured with a locknut. It is intended for use in highly corrosive and wet locations. It has a seal that acts against the cable sheath. The POSI FLEX cable gland is supplied with a sealing washer as standard.
Design Specification	IEC 62444
Operating temperature	-20° C to +125° C
Ingress protection	IP66, IP67 IP68
Gland material	Nickel plated brass encapsulated in glass reinforced polyester (PBT).
Seal material	Thermoset elastomer
Gland sizes	20ss, 20s, 20, 25, 32, 40.
Data sheet	GI180214
Assembly drawing No.	053800-053804

Optional accessories	Adaptors, reducers, unions, connectors, stopper plugs
Application	Adaptors & reducers are used to change a thread size or type. Unions are used to change a male thread to a female thread of the same or different size/type. Couplers are used to change a female thread to a male one of the same or different size / type. Hex head and dome head plugs are used to blank off threaded entries. Stopper plugs are used to blank off threaded entries without the use of a headed section. They are tightened with an Allan key and there are two versions – one where the plug is tightened from the outside of the enclosure and the other where it is tightened from inside the enclosure.
Certification	IECEX, ATEX
Operating temperature	-20° C to +125° C
Ingress protection	IP66, IP67 IP68
Material	Brass (nickel plated), stainless steel or aluminium
A2, CW, CX / CZ, E1W, E1X/Z, POSI FLEX.	Earth tags, locknut, serrated washer, shroud.
IPLUS CORROSION GUARD,	Earth tags, locknut, serrated washer.
POSI FLEX	Posi Flex spanner

Variants of the products listed in this certificate where the core functions and protection systems are unchanged are also covered by the certificate.

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Application/Limitation

Manufacturer's application and assembly instructions to be followed.

Type Approval documentation

Data sheets and assembly drawings	See each product construction
Type A2	Cert.A, Cert.B, Tra, CML1
Type CW	Cert.A, Cert.B, TRb, CML1
Type CX / Z	Cert.B, CML1
Type E1W	Cert.A, Cert.B, TRc, CML1, CML2, CML3, CML4, CML5
Type E1X/Z	Cert.B, CML1, CML5
Type IPLUS CORROSION GUARD	Cert.A, Cert.B
Type POSI FLEX	Cert.A, Cert.B, CML1
Cert.A	MASC 11-263 dated 2011.09.09
Cert.B	MASC 11-303(R2) dated 2013.04.08
TRa	SGS /1542/97153 dated 1997-05-26
TRb	SGS /3641/99369 dated 1999-11-19
TRc	SGS /3641/99343 dated 1999-11-18
CML1	CML 14CA364 rev.5
CML2	R13062A/00
CML3	R12552A/00
CMC4	R1618A/00
CMC5	R364A/00
Optional accessories	IECEx ITA 13.0005X, SIRA 14 ATEX1006X, MASC-13-594, MASC-14-0998

Tests carried out

Type tests according to IEC 60529, BS 6121 and IEC 62444

Marking of product

CCG cable termination (PTY) LTD – Type designation – IP rating

Periodical assessment

The scope of the periodical assessment survey is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment to be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE