



CERTIFICATE NUMBER	25-0164964-PDA
EFFECTIVE DATE	03-Apr-2025
EXPIRY DATE	02-Apr-2030
ABS TECHNICAL OFFICE	Singapore Engineering Services

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

CCG CABLE TERMINATIONS PTY LTD

located at

**33-37 FORGE ROAD, SPARTAN IND, , KEMPTON PARK, South
Africa, 1620**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Cable, Glands and Accessories
Model: Various cable glands, thread adaptors and plugs.
See attached document.
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 02/Apr/2030 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

guanying

Guanying Wu, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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Web: www.ccgcablegland.co.za

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Product: Cable, Glands and Accessories
Model: Various cable glands, thread adaptors and plugs.
See attached document.

Endorsements:

Intended Service:

Cable glands for use on ABS Classed Vessels and Offshore Installations in accordance with the listed ABS Rules and International Standards.

Description:

Hazardous area installation.
Refer to the attached document.

Rating:

Gland Material: Brass (Marine Grade Electroless Nickel Plated), Stainless Steel 316/316L, Aluminum
Seal Material: Standard Thermoset Elastomer or Extreme Temperature Seals, Quick setting Barrier Resin, Silicon, EPDM
Sealing Gasket Material: HDPE, Nylon 66 or PTFE
Cable Type: Unarmored, Unarmored Copper Tape, Braided or Lead Sheathed, Heat Trace, Tape and Aluminum
Armor, Steel Wire Armor, MC-HL, Teck Cable, Marine Shipboard Cable
Ingress Degree of Protection: IP65, IP66 & IP68
Ex ratings: Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex tb IIIC Db

Service Restriction:

Unit Certification is not required for this product.
If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The gland with its accessory is to be assembled strictly in accordance with the fitting instructions supplied with each component by the manufacturer.
3. ATEX certified equipment is not to be installed in hazardous areas on U.S vessels unless it can be prove to have been tested to the applicable IEC 60079 series standards by an independent laboratory accepted by the U.S Coast Guard. USCG notice 01-12 (February 7, 2012).

Notes/Drawing/Documentation:

Drawing No. E1EXULS_HMG230323, E1EX-U Lead Seal cable gland, Revision: -, Pages:
Drawing No. Ex_Corrosion_Guard_VS_Vortex_BG010622E, Ex Corrosion Guard VS VX barrier gland, Revision: -, Pages:
Drawing No. S45_Swivel 45° Adaptor ADS191023, Swivel 45° Adaptor, Revision: -, Pages:
Drawing No. D1EX_VX_BG010622, D1EX VX barrier gland, Revision: -, Pages:
Drawing No. TMCX_Vortex_Gland BG011123, TMCX cable sealing connector, Revision: -, Pages:
Drawing No. UNITEx_F_OMG230824, UNITEx-F deluge seal gland, Revision: -, Pages:
Drawing No. SC_Swivel Coupler SC191023, Swivel Coupler, Revision: -, Pages:
Drawing No. FLPTR_Vortex_BG010622, FLP TR VX barrier cable gland, Revision: -, Pages:
Drawing No. Fixed_Y_Adaptor_FTA080323, Fixed Y Adaptor, Revision: -, Pages:
Drawing No. A2EXFHC_GH280323, A2EX-FHC double compression gland, Revision: -, Pages:
Drawing No. UNITEx_VX_OMG030523E, UNITEx VX barrier cable gland, Revision: -, Pages:
Drawing No. FLP Vortex_BG300523, FLP VX barrier cable gland, Revision: -, Pages:

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Drawing No. SCB_Swivel Barrier Coupler SCB191023, Swivel Barrier Coupler, Revision: -, Pages:
Drawing No. InsulatedAdaptor_INAD080323, Insulated Adaptor, Revision: -, Pages:
Drawing No. Union_UN080323, Union, Revision: -, Pages:
Drawing No. 90°FixedAdaptor_AD080323, 90°FixedAdaptor, Revision: -, Pages:
Drawing No. IECEx CML 18.0018X, Cable gland certificate, Revision: 8, Pages:
Drawing No. BDM_BreatherDrainPlug_PL010424, Breather Drain Plug, Revision: -, Pages:
Drawing No. CML_14CA370_2, DTS01 certificate, Revision: 5, Pages:
Drawing No. A2F_Vortex_Gland_BG230224, A2F-VX barrier compression gland, Revision: -, Pages:
Drawing No. Adj_T_Adaptor_ADTA030423, Adjustable T Adaptor, Revision: -, Pages:
Drawing No. Coupler_CO080323, Coupler, Revision: -, Pages:
Drawing No. CML_15Y728, IEC 60529 certificate, Revision: 2, Pages:
Drawing No. IECEx CML 20.0011, Cable gland certificate, Revision: 4, Pages:
Drawing No. Adj_Y_Adaptor_ADTA030423, Adjustable Y Adaptor, Revision: -, Pages:
Drawing No. 3527BlankingPlugEx_PL0010222, Blanking plug - non metallic, Revision: -, Pages:
Drawing No. SA_Swivel Adaptor_SA191023, Swivel Adaptor, Revision: -, Pages:
Drawing No. ExCorrosionGuard_GH010323, Ex Corrosion Guard cable gland, Revision: -, Pages:
Drawing No. E1EX_GH010424E, E1EX captive component gland, Revision: -, Pages:
Drawing No. E1EXUVS_HMG280323E, E1EX-U-VS captive component gland, Revision: -, Pages:
Drawing No. ExCorrosionGuard_LeadSeal_GH010622, Ex Corrosion Guard LeadSeal cable gland, Revision: -, Pages:
Drawing No. SB45_Swivel 45° Barrier Adaptor SB45_191023, Swivel Barrier 45° Adaptor, Revision: -, Pages:
Drawing No. FLP_HMG010622, FLP captive component gland, Revision: -, Pages:
Drawing No. SELB_Swivel Elbow Adaptor SELB191023, Swivel Elbow Adaptor, Revision: -, Pages:
Drawing No. PosiGrip_GH010622, Posi Grip compression gland, Revision: -, Pages:
Drawing No. E1EXUVSVORTEX_BG280323E, E1EX-U-VS VX barrier gland, Revision: -, Pages:
Drawing No. UNITEEx-F_VX_OMG230824, UNITEEx-F VX barrier cable gland, Revision: -, Pages:
Drawing No. A2FFHC_GH200622E, A2F-FHC compression gland, Revision: -, Pages:
Drawing No. A2EXVX_BG010623, A2EX VX barrier compression gland, Revision: -, Pages:
Drawing No. UNITEEX_D_OMG261023E, UNITEEX-D captive component gland, Revision: -, Pages:
Drawing No. Varitex_D_Vortex_Barrier_Gland_OMG010424E, Varitex-D VX barrier cable gland, Revision: -, Pages:
Drawing No. A2F_F_Vortex Gland_BG120723, A2F-F VX barrier compression gland, Revision: -, Pages:
Drawing No. IECEx_CML 16.0021X, Breather drain certificate, Revision: 3, Pages:
Drawing No. A2F-HTF_GH080323E, A2F-HTF compression gland, Revision: -, Pages:
Drawing No. UNITEEX_D_VS_OMG300523E, UNITEEX-D VS captive component gland, Revision: -, Pages:
Drawing No. A2EX_GH030523, A2EX double compression gland, Revision: -, Pages:
Drawing No. CWe_GH010622E, CWe deluge seal gland, Revision: -, Pages:
Drawing No. E1EXLS_GH261023E, E1EX Lead Seal cable gland, Revision: -, Pages:
Drawing No. Adjustable_90° Adaptor_AD030423, Adjustable 90° Adaptor, Revision: -, Pages:
Drawing No. E1EXU_HMG280323E, E1EX-U captive component gland, Revision: -, Pages:
Drawing No. ArmorTEx_HMG010622, ArmorTEx captive component gland, Revision: -, Pages:
Drawing No. CXe_GH071222E, CXe deluge seal gland, Revision: -, Pages:
Drawing No. ExCorrosionGuard_Vortex_BG010323, Ex Corrosion Guard VX barrier gland, Revision: -, Pages:
Drawing No. StopperPlug_PL080323, StopperPlugs, Revision: -, Pages:
Drawing No. E1EXVSVortex_BG260523E, E1EX-VS VX barrier gland, Revision: -, Pages:
Drawing No. POSIGRIPVX_BG300523, POSI GRIP VX barrier cable gland, Revision: -, Pages:
Drawing No. FLPHOSE_HMG010124, FLP HOSE compression gland, Revision: -, Pages:
Drawing No. SBA_Swivel Barrier Adaptor SBA191023, Swivel Barrier Adaptor, Revision: -, Pages:
Drawing No. TMC_HG300523, TMC cable connector, Revision: -, Pages:
Drawing No. E1EXVX_BG201023E, E1EX VX barrier gland, Revision: -, Pages:
Drawing No. Fixed_T_Adaptor_FTA080323, Fixed T Adaptor, Revision: -, Pages:
Drawing No. FLPTR_HMG010124, FLP TR compression gland, Revision: -, Pages:
Drawing No. SBELB_Swivel Barrier Elbow Adaptor SBELB191023, Swivel Barrier Elbow Adaptor, Revision: -, Pages:

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Drawing No. A2FXR_HMG280323E, A2FX-R double compression gland, Revision: -, Pages:
Drawing No. IECEx_CML 16.0059U, Fixed 90°, T and Y adaptor certificate, Revision: 3, Pages:
Drawing No. A2EX_VS_Vortex_BG030523E, A2EX-VS VX barrier gland, Revision: -, Pages:
Drawing No. UNITEx_E_OMG300523E, UNITEx-E deluge seal gland, Revision: -, Pages:
Drawing No. Varitex-D_Gland_OMG010424, Varitex-D compression cable gland, Revision: -, Pages:
Drawing No. A2F_GH030523E, A2F compression gland, Revision: -, Pages:
Drawing No. IECEx_CML 16.0062X, Adaptors certificate, Revision: 5, Pages:
Drawing No. Adaptor_AD080323, Adaptor, Revision: -, Pages:
Drawing No. Armortex_VRTX_BG010622, Armortex VX barrier gland, Revision: -, Pages:
Drawing No. A2F_R_GH280323E, A2F-R compression gland, Revision: -, Pages:
Drawing No. A2EXFHC_BG010623E, A2EX-FHC VX barrier gland, Revision: -, Pages:
Drawing No. CML 14CA364, IEC 62444 certificate, Revision: 7, Pages:
Drawing No. E1EXU_Vortex_BG280323E, E1EX-U VX barrier gland, Revision: -, Pages:
Drawing No. Reducer_RD080323, Reducer, Revision: -, Pages:
Drawing No. D1EX_GH010622, D1EX captive component gland, Revision: -, Pages:

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 02/Apr/2030 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

ABS Rules for Conditions of Classification (2025): 1A-1-4/7.7, 1A-1-A3, 1-1-A4, which covers the following:
2025 Rules for Building and Classing Marine Vessels: 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/13, 4-8-3/15 Table 1A, 1B & 2, 4-8-4/27.5.1;

ABS Rules for Conditions of Classification (2025) – Offshore Units and Structures 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, which covers the following:
2025 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11, 4-3-1/15, 4-3-1/ Table 2 & 3, 4-3-1/15, 4-3-3/9.1.1, 4-3-3/9.3.1;

ABS Rules for Conditions of Classification (2025) – High Speed Craft 1C-1-4/11.9, 1C-1-A2, 1C-1-A3, which covers the following:
2025 Rules for Building and Classing High Speed Craft: 4-6-1/11, 4-6-1/15, 4-6-1/Table 2 & 3, 4-6-3/9.1.1, 4-8-3/9.3.1

National:

NA

International:

IEC 62444:2010
IEC 60079-0:2017

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IEC 60529:2013

Government:

NA

EUMED:

NA

OTHERS:

NA

Company: CCG Cable Terminations Pty Ltd

Model Number: **A2EX (QS) (VS) (VX), A2EX-FHC (VS)(QS) (VX), A2EX-FHC Lead Seal (VS)(QS)(VX), A2F-R, A2F-HTF, A2FX, A2FX-R, ARMORTEX (QS)(VX), CWe, CXe, D1EX (QS)(VX), E1EX Lead Seal (QS) (VX), E1EX (VS) (QS)(VX), E1EX U (VS) (QS) (VX), EXCG (LS) (VS) (QS) (VX), FLP (QS) (VX), FLP Hose, FLP-TR (QS) (VX), Posi Grip (QS) (VX), UNITEx (QS)(VX), UNITEx-D (VS), UNITEx-E, UNITEx-F (QS) (VX), VRTX, TMC, TMCX, A2FVX, A2F-F-VX, VARITEx-D, VARITEx-D-VX;**

90° Fixed Adaptor, Fixed T Adaptor, Fixed Y Adaptor, Adaptor, Breather Drain Adaptor, Insulated Adaptor, Adjustable Elbow , Adjustable T Adaptor, Adjustable Y Adaptor, Reducer, Coupler, Unions, Breather Drain Plug, Brass Plug, Metallic Plug (Hex, Dome, Stopper), Non Metallic Plug (Ex), Swivel Adaptor, Swivel Barrier Adaptor, Swivel Coupler, Swivel Barrier Coupler, Swivel 90° Adaptor, Swivel Barrier 90° Adaptor, Swivel 45° Adaptor, Swivel Barrier 45° Adaptor;

PDA Number: 25-0164964-PDA

Issuance date: 3-Apr-2025

Expiration date: 2-Apr-2030

Revision number: 1

Armored Cables							
Marking	Ex db IIC Gb	Ex eb IIC Gb	Ex db I Mb	Ex eb I Mb	Ex tb IIIC Db	IP 66/68	IP 65 NPT
E1EX (VS)(LS) (QS)(VX)	YES	YES	N/A	N/A	YES	YES	YES
E1EX U (VS)(LS) (QS)(VX)	YES	YES	YES	YES	YES	YES	YES
E1EX LS	YES	YES	N/A	N/A	YES	YES	YES
D1EX (QS)(VX)	YES	YES	N/A	N/A	YES	YES	YES
Cxe	N/A	YES	N/A	N/A	YES	YES	YES
UNITEx-D (VS)(LS)	YES	YES	N/A	N/A	YES	YES	YES
EXCG – LS	YES	YES	N/A	N/A	YES	YES	N/A
ARMORTEX (QS)(VX)	YES	YES	YES	YES	YES	YES	YES
FLP (QS)(VX)	YES	YES	YES	YES	YES	YES	YES
VRTX SWA	N/A	YES	N/A	N/A	YES	YES	N/A
ExCG (VS)(LS) (QS)(VX)	YES	YES	N/A	N/A	YES	YES	N/A

Materials

Description	Materials
Metallic Parts	BRASS (Nickel-plated) CZ121, Stainless steel 316, BRONZE PB2, MILD STEEL (EN8)
Corrosion guard	30% GLASS PBT KP213G40 (Not an essential part of the explosion protection)
Skid Ring	BRASS (Nickel-plated) CZ121, STAINLESS STEEL 316, BRONZE PB2, MILD STEEL (EN8) HDPE D7255/HL (-100°C to 120°C) or PTFE CCG-PTFE-001(-270°C to 260°C) Nylon (-65°C to 120°C)
Sealing Compound	Clear Quick Stop Ex Resin S50/EPA (-50°C to 120°C) Coloured Vortex Resin S50/EPA/Y (-50°C to 120°C)
Outer/Inner Seal	Clear Quick Stop Ex Resin S50/EPA (-50°C to 120°C) Coloured Vortex Resin S50/EPA/Y (-50°C to 120°C)
Posi grip	30% Glass filled Polyester CCG PBT SPESIN KP213G30 (-30°C to 125°C) ** RTI= 120°C

**The plastic material for the Posigrip is external to the metallic parts. The Plastic Nipple Nut is a part that is fitted over the metallic Inner with its only function to clamp against the Sealing gasket and to assist in tightening/dismantling the Inner. The Outer nut plastic is moulded over the metallic part which maintains the mechanical strength of the gland.

New Products (Revised 26 March 2025)

New product	Description
TMC	Cable gland for use with MC-HL or Teck cables.
TMCX	Barrier gland version of the TMC gland.
A2F-VX	This is a single-seal barrier gland for use with unarmoured cables
A2F-F-VX	This is similar to the A2F-VX, but designed to satisfy American standards.
VARITEx-D	A single-seal cable gland for use with braid or tape armoured cables.
VARITEx-D-VX	A barrier gland version of the VARITEx-D
Swivel Adaptor	An adaptor with a flameproof swivel connection between the male and female threaded components.
Swivel Barrier Adaptor	A barrier version of the Swivel Adaptor.
Swivel Coupler	An adaptor with a flameproof swivel connection between the two female threaded components.
Swivel Barrier Coupler	A barrier version of the Swivel Coupler.
Swivel Elbow Adaptor	A 90° adaptor with a flameproof swivel connection between the male and female threaded components.
Swivel Barrier Elbow Adaptor	A barrier version of the Swivel Elbow Adaptor.
Swivel 45° Adaptor	A 45° adaptor with a flameproof swivel connection between the male and female threaded components.
Swivel Barrier 45° Adaptor	A barrier version of the Swivel 45° Adaptor.
Fixed T Adaptor	An adaptor with one male thread and two female threads in a 'T' formation.
Fixed Y Adaptor	An adaptor with one male thread and two female threads in a 'Y' formation.