



CERTIFICATE NUMBER 20-1952706-1-PDA

EFFECTIVE DATE 13-November -2020

EXPIRATION DATE 09-February-2025

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, 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** A2EX (QS) (VS) (VX), A2EX-FHC (VS) (LS) (QS) (VX), A2F, A2FX, A2FX-R, ARMORTEX (QS)(VX), CWe, CXe, D1EX (QS), E1EX (LS) (QS) (VX), E1EX (VS) (QS), 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 (SWA);  
90° Fixed Adaptor, 90° Swivel Adaptor, Adaptor, Breather Drain Adaptor, Insulated Adaptor, T Swivel Adaptor, Y Swivel Adaptor, Reducer, Coupler, Unions, Breather Drain Plug, Brass Plug, Metallic Plug (Hex, Dome, Stopper), Non Metallic Plug (Ex);

This Product Design Assessment (PDA) Certificate remains valid until 09-February-2025 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

Manoraaju, 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)

## CCG CABLE TERMINATIONS PTY LTD

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**Tier: 3 - Type Approved, unit certification not required**

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**Product:** Cable, Glands and Accessories

**Model:** A2EX (QS) (VS) (VX), A2EX-FHC (VS) (LS) (QS) (VX), A2F, A2FX, A2FX-R, ARMORTE<sub>x</sub> (QS)(VX), CWe, CXe, D1EX (QS), E1EX (LS) (QS) (VX), E1EX (VS) (QS), E1EX U (VS) (QS) (VX), EXCG (LS) (VS) (QS) (VX), FLP (QS) (VX), FLP Hose, FLP-TR (QS) (VX), Posi Grip (QS) (VX), UNITE<sub>x</sub> (QS)(VX), UNITE<sub>x</sub>-D (VS), UNITE<sub>x</sub>-E, UNITE<sub>x</sub>-F (QS) (VX), VRTX (SWA);  
90° Fixed Adaptor, 90° Swivel Adaptor, Adaptor, Breather Drain Adaptor, Insulated Adaptor, T Swivel Adaptor, Y Swivel Adaptor, Reducer, Coupler, Unions, Breather Drain Plug, Brass Plug, Metallic Plug (Hex, Dome, Stopper), Non Metallic Plug (Ex);

**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:**

Refer to the attached document.

**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:**

Documents:

Drawing No. A2EX, Compression Gland, Revision: -, Pages: 2

Drawing No. A2EX VX - VORTEX, Barrier Compression Gland, Revision: -, Pages: 2

Drawing No. A2EX-FHC VX - VORTEX, Barrier Compression Gland, Revision: -, Pages: 2

Drawing No. A2EX-FHC VS, Compression Gland, Revision: -, Pages: 2

Drawing No. A2EX-FHC LS, Compression Gland, Revision: -, Pages: 2

Drawing No. A2EX-VX, Vortex Barrier Compression Gland, Revision: -, Pages: 2

Drawing No. A2F, Compression Gland, Revision: -, Pages: 2

Drawing No. A2FX, Double Compression Gland, Revision: -, Pages: 2

Drawing No. A2FX-R, Double Compression Gland, Revision: -, Pages: 2

Drawing No. ArmorTE<sub>x</sub>, Captive Component Gland, Revision: -, Pages: 2

Drawing No. ArmorTE<sub>x</sub> QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2

Drawing No. CWe, Cable Gland with Deluge Seal, Revision: -, Pages: 2

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Drawing No. CXe, Cable Gland with Deluge Seal, Revision: -, Pages: 2  
Drawing No. E1EX, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. E1EX Lead Seal, Cable Gland, Revision: -, Pages: 2  
Drawing No. E1EX VX - VORTEX, Barrier Compression Gland, Revision: -, Pages: 2  
Drawing No. E1EX-U, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. E1EX-U Lead Seal, Cable Gland, Revision: -, Pages: 2  
Drawing No. E1EX-U QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2  
Drawing No. E1EX-U-VS, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. E1EX-U-VS QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2  
Drawing No. E1EX-VS, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. E1EX-VS QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2  
Drawing No. EX Corrosion Guard, Cable Gland, Revision: -, Pages: 2  
Drawing No. EX Corrosion Guard QuickStop, Barrier Gland, Revision: -, Pages: 2  
Drawing No. EX Corrosion Guard Lead Seal, Cable Gland, Revision: -, Pages: 2  
Drawing No. EX Corrosion Guard VS, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. Ex Corrosion Guard-VX - VORTEX, Barrier Gland, Revision: -, Pages: 2  
Drawing No. FLP, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. FLP Hose, Compression Gland, Revision: -, Pages: 2  
Drawing No. FLP VX VORTEX, Barrier Gland, Revision: -, Pages: 2  
Drawing No. FLP TR, Compression Gland, Revision: -, Pages: 2  
Drawing No. FLP-TR VX VORTEX, Barrier Gland, Revision: -, Pages: 2  
Drawing No. POSI GRIP, Compression Gland, Revision: -, Pages: 2  
Drawing No. POSI GRIP -VX, VORTEX Barrier Gland, Revision: -, Pages: 2  
Drawing No. Posi Grip VX - VORTEX, Compression Barrier Gland, Revision: -, Pages: 2  
Drawing No. UNITEx -D, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. UNITEx -D VS, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. UNITEx VX - VORTEX, Barrier Gland with Deluge Seal, Revision: -, Pages: 2  
Drawing No. UNITEx-E, Cable Gland with Deluge Seal, Revision: -, Pages: 2  
Drawing No. D1EX, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. D1EX, QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2  
Drawing No. VARITEx (VRTX), Compression Gland, Revision: -, Pages: 2  
Drawing No. VARITEx (VRTX) SWA, Compression Gland, Revision: -, Pages: 2  
Drawing No. ARMORTEX, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. ARMORTEX QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2  
Drawing No. ARMORTEX VX - VORTEX, Barrier Gland, Revision: -, Pages: 2  
Drawing No. UNITEx F, Captive Component Gland, Revision: -, Pages: 2  
Drawing No. UNITEx F, QuickStop-Ex, Barrier Gland, Revision: -, Pages: 2  
Drawing No. UNITEx F VX - VORTEX, Barrier Gland, Revision: -, Pages: 2

#### Test Report:

Report No. CML 16ATEX1001X, EU Type Examination Certificate by CMLEx, Revision: 5, Pages: 24

Report No. CML\_14CA364, IEC 62444 Test report by CMLEx, Dated: 29 May 2019, Issue: 4, Revision: 4, Pages: 8

Report No. CML\_15Y728, IEC 60529 IPX8 Test report by CMLEx, Dated: 04 September 2015, Issue: 0, Revision: 0, Pages: 1

#### Terms of Validity:

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**STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification (2020): 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:  
2020 Rules for Building and Classing Marine Vessels: 4-8-3/1.7, 4-8-4/27.5.1;

ABS Rules for Conditions of Classification (2020) – High Speed Craft 1-1-4/11.9, 1-1-A2, 1-1-A3, which covers the following:

2020 Rules for Building and Classing High Speed Craft: 4-6-1/11, 4-6-3/9.3.1;

Rules for Conditions of Classification (2020) – Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2020 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11, 4-3-3/9.1.1;

**National:**

NA

**International:**

IEC 62444:2010

IEC 60079-0:2017

IEC 60529:2013

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA



FLP TR (QS)(VX)	YES						
A2EX (VS)(LS) (QS)(VX)	YES	YES	N/A	N/A	YES	YES	YES
A2EX-FHC (VS)(LS)	YES	YES	N/A	N/A	YES	YES	YES
VRTX	N/A	YES	N/A	N/A	YES	YES	N/A
A2FX-R (QS)(VX)	YES						

QS- The QS in the table above, refers to the Quickstop version of the cable glands. This utilises a clear potting compound to achieve a hard setting seal inside the gland. The sealing compound is transparent and accommodates inspection.

VX- The VX in the table above, refers to the Vortex version of the cable glands. This utilises a coloured potting compound to achieve a hard setting seal inside the gland. There is a transparent elastomeric seal at the end of the compound enclosure to accommodate inspection.

VS - For variable speed drive cables

LS - For lead sheathed cables

### 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.