



CERTIFICATE NUMBER
17-LD1619350-PDA

DATE
02 May 2017

ABS TECHNICAL OFFICE
London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of
CMP PRODUCTS LTD.

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: **A2FRC Cable Glands for Conduit, Adaptors, Reducers and Stopping Plugs**

This Product Design Assessment (PDA) Certificate 17-LD1619350-PDA, dated 02/May/2017 remains valid until 01/May/2022 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Vasileios Vitanopoulos
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 the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

CMP PRODUCTS LTD.

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Telephone: +44 191 265 7411

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Email: customerservices@cmp-products.com

Web: www.cmp-products.com

Tier: 3 - Type Approved, unit certification not required**Product:** Cable, Glands and Accessories**Model:** A2FRC Cable Glands for Conduit, Adaptors, Reducers and Stopping Plugs**Intended Service:**

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

Description:

Gland Accessories of Certified-Safe Type, Model A2FRC for conduit, Adaptors, Reducers and Stopping Plugs as certified by a recognized testing laboratory. They can be used in both hazardous and/or non-hazardous locations on ships and offshore units.

A2FRC range of cable glands

For termination of circular braided or unarmoured cables. Consisting of a male-threaded entry item, seal actuation nut and outer captivated or running coupling. Front entry item, with a displacement sealing ring screws into an enclosure entry. The outer running coupling retained in the seal actuation nut allowing a free running threaded connection.

Ranges of Adaptors, Reducers and Stopping Plugs

737: Adaptor/reducer

787: 90 degree Adaptor

797: Adaptor

777: Insulated Adaptor

747, 757, 767: Stopping Plugs

783, 793: Y adaptor, T adaptor

Types 737 and 797 Ranges of Adaptors and Reducers:

Metallic or non-metallic 737 Range of Adaptors / Reducers for conversion to another thread form and/or size. 797 Range of Adaptors intended to convert an enclosure entry to the opposite thread form and/or size. May have an optional O-ring seal.

Types 747, 757 and 767 Ranges of Stopping Plugs

Type 747 Range of Stopping Plugs manufactured from metallic or non-metallic material comprising a cylindrical body with an external male thread. Having a socket head recess (747), hexagonal head (757) or domed head (767). May have an optional 'O' ring seal.

Type 777 Range of insulated adaptors

Consist of three parts: a metallic front portion that forms a threaded entry into the equipment, a non-metallic insulator and a metallic rear section that accommodates a gland.

Type 787 Range of Right-Angled Adaptors

Have a male thread at one end, a female thread at 90 ° to the male thread. Intended to provide cable entry options where space is limited. May have an optional O-ring seal.

Type 783 series (Y) and 793 series (T) shaped dual entry angled Adaptors. Having a male thread at one end and two female threads 120 ° and 90 ° respectively to the male thread. Intended to provide dual cable entry options for cables to enter enclosures where space is limited. May have an optional O-ring seal.

Rating:

A2FRC: range of cable glands

Ingress protection: IP 66

Temperature: -60 °C to +130 °C (standard seal), -20 °C to +200 °C (high temperature seal)

Type of Protection: Flameproof, Increased Safety, Restricted Breathing and Dust Protection

Marking: Ex d IIC Gb, Ex e IIC Gb, Ex ta IIIC Da, Ex nR IIIC Da; IEC Ex Certificate: IECEx SIR13.0023X Issue 3

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: II 2G Ex d IIC Gb, II 2G Ex e IIC Gb, II 1D Ex ta IIIC Da, II 3 Ex nR IIC Gc; ATEX Certificate: SIRA 13ATEX1068X, SIRA 13ATEX4074X

737, 747, 757, 767, 797

Ingress protection: IP 64

Temperature: Non-Metallic (737,747, 757, 767): -20 °C to +60 °C, Metallic:-60 °C to +20 °C

Type of Protection: Flameproof, Increased Safety and Dust

Marking: Ex d IIC Gb/ Ex e IIC Gb, II 1D Ex ta IIIC Da (Metallic Version)

: Ex e IIC Gb, Ex ta IIIC Da (Non-metallic Version)

Marking: II 2G Ex d IIC Gb/ Ex e IIC Gb, II 1D Ex ta IIIC Da (Metallic Version)

: II 2 G Ex e IIC Gb, II 1D Ex ta IIIC Da (Non-metallic Version)

IEC Ex Certificate: IECEX SIR 13.0094X Issue 1, ATEX Certificate: SIRA 13ATEX1265X

777

Ingress protection: IP 66

Temperature: -60 °C to +130 °C

Type of Protection: Flameproof, Increased Safety and Dust

Marking: Ex d IIC Gb/ Ex e IIC Gb/ Ex ta IIIC Da; IECEX Certificate: IECEX SIR 10.0027U Issue 0

: II 2GD Ex d IIC Gb / Ex e IIC Gb / Ex ta IIIC Da; ATEX Certificate: Sira 10ATEX1057U Issue: 0

787

Ingress protection: IP 64

Temperature: -60 °C to +200 °C

Type of Protection: Flameproof, Increased Safety and Dust

Marking: Ex d IIC Gb / Ex e IIC Gb, Ex ta IIIC Da; IECEX Certificate: IECEX SIR 14.0014U Issue 0

: II 2 G II 1 D, Ex e IIC Gb/ Ex d IIC Gb/ Ex ta IIIC Da; ATEX Certificate: Sira 14ATEX1033U Issue 0

783, 793

Ingress protection: IP 64

Temperature: -60 °C to +200 °C

Type of Protection: Flameproof, Increased Safety, Restricted Breathing and Dust Protection

Marking: Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da; IEC Ex Certificate: IECEX SIR IECEX SIR 16.0081U Issue 1

: II 1D 2G Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da; ATEX Certificate: Sira 16ATEX1234U Issue 1

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:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

The gland accessory is to be assembled strictly in accordance with the fitting instructions supplied with each component.

Applicable class of the hazardous location is to be in accordance with the Certificate to cover the A2FRC Cable Glands for Conduit, Adaptors, Reducers and Stopping Plugs.

Special conditions apply as per IECEX Certificates and ATEX Certificates.

Notes/Drawing/Documentation:

Drawing No. 737 SIR 13.0094X, Certificate, Revision: 01, Date: 17.09.2014, Pages: 06

Drawing No. 777 IECEX SIR 10.0027U, Certificate, Revision: 00, Date: 10..05.2010, Pages: 04

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Drawing No. Type 787 IECEX SIR 14.0014U, Certificate, Date: 20.03.2014, Revision: 00, Pages: 05
Drawing No. 783,793 IECEX SIR 16.0081U, Certificate, Revision: 01, Date: 13.12.2016, Pages: 06
Drawing No. A2FRC IECEX SIR 13.0023X, Certificate, Revision: 03, Date: 17.12.2014, Pages: 08
Drawing No. FI 428, Fitting Instruction 777, Revision: 10, Date: 24.06.2015, Pages: 02
Drawing No. FI 431, Fitting Instruction 747, 757, 767, Revision: 11, Date: 24.06.2015, Pages: 02
Drawing No. FI 432, Fitting Instruction 787, Revision: 08, Date: 24.06.2015, Pages: 02
Drawing No. FI 435, Fitting Instruction 737, 797, Revision: 09, Date: 24.06.2015, Pages: 02
Drawing No. FI 448, Fitting Instruction A2FRC, Revision: 07, Date: 24.06.2015, Pages: 02
Drawing No. FI 516, Fitting Instruction 783, 793, Revision: 04, Date: 13.07.2016, Pages: 02
Drawing No. GB/SIR/14.0066/00, Test Report, Revision: 00, Date: 08.2014, Pages: 12
Drawing No. GB/SIR/EXTR 10.0087/00, Test Report, Revision: 00, Date: 01.12.2016, Pages: 19
Drawing No. GB/SIR/EXTR 13.0066/00, Test Report, Revision: 00, Date: 04.2010, Pages: 62
Drawing No. GB/SIR/EXTR 13.0298/00, Test Report, Revision: 00, Date: 11.2013, Pages: 32
Drawing No. GB/SIR/EXTR 14.0201/00, Test Report, Revision: 00, Date: 08.2014, Pages: 21
Drawing No. GB/SIR/EXTR 14.0282/00, Test Report, Revision: 00, Date: 13.10.2014, Pages: 11
Drawing No. GB/SIR/EXTR 14.0307/00, Test Report, Revision: 00, Date: 05.12.2014, Pages: 14
Drawing No. GB/SIR/EXTR 16.0200/00, Test Report, Revision: 00, Date: 08.2016, Pages: 33
Drawing No. GB/SIR/EXTR 16.0313/00, Test Report, Revision: 00, Date: 12.2016, Pages: 13
Drawing No. R21992A/00, Test Report, Revision: 00, Date: 05.2010, Pages: 12
Drawing No. R25736A/00, Test Report, Revision: 00, Date: 08.2011, Pages: 15
Drawing No. R28132A/00, Test Report, Revision: 00, Date: 07.2013, Pages: 06
Drawing No. R70006933A/00, Test Report, Revision: 00, Date: 07.2014, Pages: 04
Drawing No. SIRA 10Y9148U, Certificate, Revision: 03, Date: 28.07.2014, Pages: 03
Drawing No. SPP 240, Data Sheet 783, Revision: 03, Pages: 01
Drawing No. TDS 500, Data Sheet 737, Revision: 08, Pages: 03
Drawing No. TDS 503, Data Sheet 757, Revision: 08, Pages: 03
Drawing No. TDS 504, Data Sheet 787, Revision: 02, Pages: 01
Drawing No. TDS 505, Data Sheet 767, Revision: 08, Pages: 01
Drawing No. TDS 540, Data Sheet, A2FRC, Revision: 08, Pages: 01
Drawing No. TDS 586, Data Sheet 777, Revision: 09, Pages: 01
Drawing No. TDS 588, Data Sheet 747, Revision: 06, Pages: 01
Drawing No. TDS 590, Data Sheet 797, Revision: 06, Pages: 01
Drawing No. TPC 200, CMP Cable Gland Catalogue, Revision: 02, Pages: 184
Drawing No. CMP Statement, Revision: 00, Pages: 1
Drawing No. SIRA 14ATEX1033U, 787 ATEX certificate, Revision: 00, Date: 19.02.2014, Pages: 04
Drawing No. SIRA13ATEX1265X, 737-797 ATEX certificate, Revision: 01, Date: 05.09.2014, Pages: 06
Drawing No. SIRA 10ATEX1057U, 777 ATEX certificate, Revision: 00, Date: 09.04.2010, Pages: 04
Drawing No. SIRA13ATEX4074X, CMP A2FRC certificate, Revision: 02, Date: 17.12.2014, Pages: 07
Drawing No. SIRA13ATEX1068X, CMP A2FRC certificate, Revision: 02, Date: 05.12.2014, Pages: 07
Drawing No. SIRA 16ATEX1234U, 783, 793 ATEX Certificate, Revision: 01, Date: 13.11.2016, Pages: 05
Drawing No. SIRA 10Y9147U, BS 6121 Certificate, Revision: 00, Date: 11.05.2010.

Terms of Validity:

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STANDARDS**ABS Rules:**

- Steel Vessels (2017): 1-1-4/7.7, 1-1-A3&A4;; 4-1-1/7.15, 4-8-3 /1.7, 4-8-3/13;
- Steel Vessels Under 90 Meters (295 Feet) in Length (2017): 1-1-4/7.7, 1-1-Appendix 3 & 4; 4-1-1/37, 4-6-3/11.1.1 (a);
- Offshore Support Vessels (2017): 1-1-4/7.7, 1-1-A3&A4;; 4-1-1/7.15, 4-8-3 /1.7, 4-8-3/13;
- Facilities on Offshore Installations (2016): 1-1-4/9.7, 1-1-A2&A3;
- Mobile Offshore Drilling Units (2017): 1-1-4/9.7, 1-1-A3&A4;; 6-1-1/9, 6-1-1/13; 4-1-1/7.9, 4-3-3/9.1.2;
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2017): 1-1-4/7.7, 1-1-A3&A4; 4-1-1/21, 4-5-3/11.1.1;
- High Speed Crafts (2017): 1-1-4/11.9, 1-1-A2&A3; 4-1-1/37, 4-6-3/9.1.1;
- Steel Barge Rules (2017): 1-1-4/7.7, 1-1-A3&A4;

National:

NA

International:

A2FRC, 737, 787, 797, 777, 747, 757, 767

IEC 60079-0 Ed 6.0:2011, IEC 60079-1 Ed 6.0:2007, IEC 60079-7 Ed 4.0:2006, IEC 60079-15 Ed 4.0:2010, IEC

60079-31 Ed 1.0:2008, IEC 62444 Ed 1.0:2010

EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-15:2010, EN 60079-31:2009, BS 6121:1989, EN 50262:1998 + Amendment 2001, EN 62444:2013

783, 793: Y adaptor, T adaptor

IEC/EN 60079-0 Ed 6.0:2011, IEC/EN 60079-1 Ed 7.0:2014, IEC/EN 60079-7 Ed 5.0:2015, IEC/EN 60079-31 Ed 2.0:2013

EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN 60079-7:2015, EN 60079-31:2014

Government:

NA

EUMED:

NA

OTHERS:NA 