Certificate of Compliance

Certificate: 2627370 (203679) **Master Contract:** 203679

Project: 70103353 **Date Issued:** 2017-03-31

Issued to: **Peppers Cable Glands Ltd.**
Stanhope Rd. Camberley
Surrey, GU15 3BT
UNITED KINGDOM
Attention: Malcolm Perry

The products listed below are eligible to bear the CSA Mark shown with adjacent indicator 'US'

US

Issued by: Siros Ghanbar-zadeh
Siros Ghanbarzadeh

PRODUCTS
CLASS - C441885 - CABLE-Hardware-For Hazardous Locations-Certified to U.S. Standards

Class II Division 1, Groups EFG; Class III
Class I, Zone 1, AEx e IIC Gb;
Class II, Zone 20, AEx ta IIIC Da;
IP66, IP68; Type 4X
(Ta = -35°C to +90˚C Neoprene Seals / Ta = -60˚C to +180˚C Silicone Seals)

Gland Type: **CR-*****

Available Part No's.:	**C**	**R**	*	*	*
			1	B	R
			2	S	
			3		
			4		

Options:		
	1	Neoprene Seals
	2	Neoprene Seals with Lead Sheath Cable Continuity Washer
	3	Silicone Seals
	4	Silicone Seals with Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material
	R	Reducer Bore option

Gland Type: **CR-D****

Available Part No's.:	**C**	**R**	**D**	*****	*****
				1	B
				2	S
				3	
				4	

Options:		
	1	Neoprene Seal
	2	Neoprene Seal with Lead Sheath Cable Continuity Washer
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material

Gland Type: **A*L****

Available Part No's.:	**A**	*****	**L**	*****	*****
		1		B	F
		2		S	E
		3		A	
		4			

Options:		
	1	Neoprene Seal with Lead Sheath Cable Continuity Washer
	2	Neoprene Seal
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	A	Aluminum
	B	Brass material
	S	316 Stainless Steel material
	F	Ex e (Increased Safety) approvals
	E	Ex e (Increased Safety) approval only

Gland Type: **A****

Available Part No's.:	**A**	*	*	*	*
		1	LDS	A	F
		2	RDF	B	E
		3	RDM	S	
		4			

Options:		
	1	Neoprene Seal with Lead Sheath Cable Continuity Washer
	2	Neoprene Seal
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	LDS	Fixed Double seal
	RDF	Double seal with rotating female thread conduit nut
	RDM	Double seal with Rotating male thread conduit nut
	A	Aluminum
	B	Brass material
	S	316 Stainless Steel material
	F	Ex e (Increased Safety) and Ex t (dust) approvals
	E	Ex e (Increased Safety) approval only

Gland Type: **A*LC***

Available Part No's.:	**A**	*	**LC**	*	*	*
		1		F	A	F
		2		M	B	E
		3			S	
		4				

Options:		
	1	Neoprene Seal with Lead Sheath Cable Continuity Washer
	2	Neoprene Seal
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	F	Single seal with fixed female thread conduit connector
	M	Single seal with fixed male thread conduit connector
	A	Aluminum
	B	Brass material
	S	316 Stainless Steel material
	F	Ex e (Increased Safety) and Ex t (dust) approvals
	E	Ex e (Increased Safety) approval only

Gland Type: **A*RC*****

Available Part No's.:	**A**	*	**RC**	*	*	*
		1		F	A	F
		2		M	B	E
		3			S	
		4				

Options:		
	1	Neoprene Seal with Lead Sheath Cable Continuity Washer
	2	Neoprene Seal
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	F	Single seal with rotating female thread conduit connector
	M	Single seal with rotating male thread conduit connector
	A	Aluminum
	B	Brass material
	S	316 Stainless Steel material
	F	Ex e (Increased Safety) and Ex t (dust) approvals
	E	Ex e (Increased Safety) approval only

Gland Type: **E****F***

Available Part No's.:	**E**	*	*	*	*	**F**	*
		1	W	A	IE		R
		2	X	B			
		3		S			
		4					

Options:		
	1	Neoprene Seals
	2	Neoprene Seal with Lead Sheath Cable Continuity Washer
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	W	Steel Wire Armour option
	X	SWB/Woven Steel Wire/Steel Tape/Braid
	A	Aluminum material
	B	Brass material
	S	316 Stainless Steel material
	IE	Integral Earth option
	R	Reduced Bore option

Gland Type: **D****F

Available Part No's.:	**D**	*	*	*	*	**F**
		1	W	A	IE	
		2	X	B		
		3		S		
		4				

Options:

1	Neoprene Seals
2	Neoprene Seal with Lead Sheath Cable Continuity Washer
3	Silicone Seal
4	Silicone Seal with Lead Sheath Cable Continuity Washer
W	Steel Wire Armour option
X	SWB/Woven Steel Wire/Steel Tape/Braid
A	Aluminum material
B	Brass material
S	316 Stainless Steel material
IE	Integral Earth option

Gland Type: **C****E***

Available Part No's.:	**C**	*	*	*	*	**E**	*
		1	W	A	IE		R
		3	X	B			
				S			

Options:

1	Nitrile Seals

Options:

3	Silicone Seals
W	Steel Wire Armour option
X	SWB/Woven Steel Wire/Steel Tape/Braid
A	Aluminum material
B	Brass material
S	316 Stainless Steel material
IE	Integral Earth option
R	Reducer Bore option

Gland Type: **CR-O***

Available Part No's.:	**C**	**R**	**O**	*	*	*
				1	B	R
				3	S	

Options:

1	Neoprene Seal
3	Silicone Seal
B	Brass material
S	316 Stainless Steel material
R	Reducer Bore option

Certificate: 2627370 **Master Contract:** 203679

Project: 70103353 **Date Issued:** 2017-03-31

Class 1 Division 2 Groups ABCD; Class II Division 1, Groups EFG; Class III
Class I, Zone 1, AEx d IIC Gb / AEx e IIC Gb;
Class II Zone 20 AEx ta IIIC Da;
IP66, IP68; Type 4X
(Ta = -60˚C to +135˚C)

Series: CR-C***

Gland Type: **CR-C*****

Available Part No's.:	**C**	**R**	**-**	**C**	*****	*****	*****
					2	B	R
						S	

Options:	2	Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material
	R	Reducer Bore option

Gland Type: **CR-U****

Available Part No's.:	**C**	**R**	**-**	**U**	*****	*****
					2	B
						S

Options:	2	Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material

Gland Type: **CR-X****

Available Part No's.:	**C**	**R**	**-**	**X**	*****	*****
					2	B
						S

Options:	2	Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material

Class II Division 1, Groups EFG; Class III
Class I, Zone 1, AEx e IIC Gb;
Class II Zone 20 AEx ta IIIC Da;
IP66, IP68; Type 4X
(Ta = -60˚C to +180˚C)

Gland Type: **A8*F**

Available Part No's.:	**A**	**8**	*****	**F**
			B	
			S	

Options:
- B Brass material
- S 316 Stainless Steel material

Gland Type: **A8C**F**

Available Part No's.:	**A**	**8**	**C**	*****	*****	**F**
				F	B	
				M	S	

Options:
- B Brass material
- S 316 Stainless Steel material
- F Female conduit connector
- M Male conduit connector

Gland Type: **E8X*F**

Available Part No's.:	**E**	**8**	**X**	*****	**F**
				B	
				S	

Options:
- B Brass material
- S 316 Stainless Steel material

Gland Type: **D8X*F**

Available Part No's.:	**D**	**8**	**X**	*****	**F**
				B	
				S	

Options:
- B Brass material
- S 316 Stainless Steel material

Notes:

1. The parameters of the ranges are summarized as follows:

Gland Type	Class I Division 2	Class II Division 1	AExd IIC	AEx e IIC	AEx ta IIIC	IP66/ 68/ Type 4X	Temperature range
CR-***		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
CR-D**		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A*L**		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A****		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A*LC***		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A*RC***		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
E****F*		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
D****F		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
C****E*		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
CR-O***		X		X	X	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
CR-C***	X	X	X	X	X	X	-60°C to +135°C
CR-U**	X	X	X	X	X	X	-60°C to +135°C
CR-X**	X	X	X	X	X	X	-60°C to +135°C
A8*F		X		X	X	X	-60°C to +180°C
A8C**F		X		X	X	X	-60°C to +180°C
E8X*F		X		X	X	X	-60°C to +180°C
D8X*F		X		X	X	X	-60°C to +180°C

2. For the A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D** CR-O***, C****E*, D****F* and E****F* Series of cable glands: These glands shall not be used in enclosures where the temperature at the point of contact is outside the following range:

   -35˚C to +90˚C for the Neoprene seal variants
   -60˚C to +180˚C for the Silicone seal variants

3. For the A8*F, A8C**F, E8X*F and D8X*F Series of cable glands: These glands shall not be used in enclosures where the temperature at the point of contact is outside the following range:

   -60˚C to +180˚C for the Silicone seal variants

4. For the A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D** CR-O***, C****E*, D****F*, E****F*, A8*F, A8C**F, E8X*F and D8X*F Series of cable glands: When used with unarmoured or braid armoured cable the cable entries are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
5. These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation.
6. These glands are also suitable for use with Certified Marine Shipboard unarmoured cables constructed to IEEE45/ IEC600092-353 Standards (or certified equivalent), for use on Shipboards and Offshore Rigs/platforms. These glands are also suitable for use with certified Tray Cables in which accordance with US (NEC) wiring methods describing the types of cables that may be used in Class 1 Division 2 and Class I Zone 1 and 2 classified areas, in accordance with NEC and NFPA -70 installation wiring methods restrictions.
7. The product may bear one of the following CSA markings:

   "CSA us" - Series A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D**, CR-C***, CR-U**, CR-X**, C****E*, D****F*, E****F*, A8*F, E8X*F, D8X*F and CR-O***

APPLICABLE REQUIREMENTS

The following Standards were used as a guide in the evaluation of the products covered by this Report:

UL 50 (12th Ed.)	Enclosures for Electrical Equipment Non-Environmental Considerations
UL 50E (1st Ed.)	Enclosures for Electrical Equipment, Environmental Considerations
UL514B Edition 6	Conduit, Tubing, and Cable Fittings
UL 1203 (5th Ed.)	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
UL 2225(3rd Edition)	Cables and Cable Glands for Use in Hazardous Locations
ANSI/UL 60079-0 Sixth Edition (2013)	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
ANSI/UL 60079-1 Sixth Edition (2009)	Electrical Apparatus for Explosive Gas Atmospheres - Part 1: Flameproof Enclosures "d"
ANSI/UL 60079-7 Fourth Edition (2008)	Electrical Apparatus for Explosive Gas Atmospheres - Part 7: Increased Safety "e"
ANSI/IEC 60529:2004	Degrees of Protection Provided by Enclosures (IP Code)
ANSI/ISA-60079-31 (12.10.03)-2013	Explosive Atmospheres – Part 31: Equipment Dust Ignition Protection by Enclosure "t" (Edition 1.1)

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

Markings are permanently etched or stamped on the surface of the cable glands.

CSA Monogram or the CSA monogram with adjacent indicator "US"
Manufacturer's name: Peppers Cable Glands Ltd or PEPPERS, or, the CSA Master Contract number
Model code/size
Product markings as per "PRODUCTS" section
Ambient range
Serial number or Year of manufacture: YY

Note: Where the size of the product limits the amount of marking that can be applied, the marking may be reduced with a repeat of the full marking detailed on the appropriate label and/or instructions supplied with the product. The following abbreviated markings will be permitted where necessary due to space limitations:

CSA Monogram
PEPPERS
MODEL CODE
Hazardous Location Ratings - as applicable (may be abbreviated eg. CL I DIV 2 CL II CL III)
Type 4X
AEx d IIC / AEx e IIC / AEx ta IIIC (AEx d IIC markings applicable to CR barrier glands only)
Size

- The product may bear one of the following CSA markings:

CSA us– Series A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D**, CR-C***, CR-U**, CR-X**, C****E*, D****F*, E****F*, A8*F, E8X*F, D8X*F and CR-O***

Supplement to Certificate of Compliance

Certificate: 2627370 (203679) **Master Contract:** 203679

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70103353	2017-03-31	Update CSA Report 2627370 to include revised drawing and revisions.
70013047	November 11, 2014	To permit the ranges of glands for use in Class II Division 1 Locations.
70004629	September 29, 2014	Introduction of CR-D**, C****E*, D****F*, E****F*, A8*F, E8X*F, D8X*F and CR-O***, extension of A* range and upgrade of standards to latest editions.
2627370	2013-07-03	Certification of cable glands A*L**F, A*LDS*F, A*L*F, CR****, CR-C***, CR-U** and CR-X** Series cable glands.