



## EU Type Examination Certificate CML 19ATEX1090X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **AR, ARMM and ARFF ranges of Adaptors and Reducers**
- 3 Manufacturer **Peppers Cable Glands Limited**
- 4 Address **Stanhope Road,  
Camberley, Surrey,  
GU15 3BT  
United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

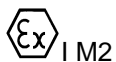
EN 60079-0:2018

EN 60079-1:2014

EN 60079-7:2015+A1:2018

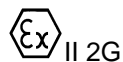
EN 60079-31:2014

- 10 The equipment shall be marked with the following:



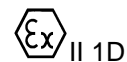
Ex db I Mb

Ex eb I Mb



Ex db IIC Gb

Ex eb IIC Gb



Ex ta IIIC Da

\* Refer to description for ambient



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## 11 Description

The range of Adaptors and Reducers (Type 'AR') comprise a hollow hexagonal body, partly threaded at each end, one end having a male thread and the other a female thread. The Adaptors and Reducers are used to convert an existing threaded cable entry aperture to a different threadform and/or size. The Adaptors and Reducers may be machined with the threadforms and/or combinations as listed below. Their thread sizes are within the ranges specified but are limited based upon thread combinations certified within the manufacturer's documentation. Adaptors and Reducers may also be fitted with an optional O-ring seal.

The products are manufactured with the following threadform options:

ISO Metric	ISO 965-1:2013 and ISO 965-3:1998 - M16 to M100
NPT and NPSM	ANSI/ASME B1.20.1:1983 (R2001) - ¼" to 4"
BSPP	BS EN ISO 228-1 - ¼" to 4"
BSPT	BS21:1985 - ¼" to 4"
PG	DIN 40430 – 7 / 9 / 11 / 13.5 / 16 / 21 / 29 / 36 / 42 / 48
PG48F	NF C 68-312

Note: All threads are manufactured in accordance with EN 60079-1:2014 clauses 5.3 and C.2.2 (as applicable).

Note: The Adapters and Reducers may be manufactured with other threadforms and pitches, provided that they are in accordance with the applicable requirements of EN 60079-1:2014 clause 5.3 and C.2.2.

### Design Options:

#### O-Ring seals

O-Ring seal materials fitted to male thread forms may be provided in the following materials to suit the application:

Nitrile
Silicone
Viton
Neoprene
Fluorosilicone
EPDM

#### Material of manufacture and marking

The Adaptors/Reducers may be manufactured from the following materials:

Brass	CW614N (CuZn 39Pb3)/ CZ121 3Pb, Ecobrass C69300/ C87850
Aluminium*	AW6082 T6 AISI 1 MgMn
Stainless Steel	1.4404/ 316L S11, 1.4401/ 316 S31, 1.4301/ 304, 1.4305/ 303

\*Not suitable for Group I use



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**Surface coating**

The products may additionally be metal plated with either: Nickel, Zinc or Anodised (0.008 mm thick max.) to suit the application.

**Product Type Reference**

The product type reference is derived from the following options:

<b>A-B-C-D-E-F-G</b>		
<b>A - Product Type</b>		
AR	Adaptor/Reducer Type	
ARMM		
ARFF		
<b>B - IP Seal code</b>		
0	No seal fitted	(-100°C to +400°C)
1	Nitrile O-ring	(-30°C to +100°C)
2	Neoprene O-ring	(-35°C to +90°C)
3	Silicone O-ring	(-60°C to +200°C)
4	Fluorosilicone O-ring	(-55°C to +200°C)
5	Viton O-ring	(-20°C to +180°C)
6	EPDM O-ring	(-50°C to +110°C)
<b>C - Material of manufacture</b>		
A	Aluminium	
B	Brass	
S	Stainless Steel	
<b>D – Protection concept code</b>		
<b>E - Plating</b>		
--	Not plated	
AN	Anodised	
NP	Nickel Plated	
ZP	Zinc	
<b>F - Male thread (female for ARFF) size and type</b>		
<b>G - Female thread (male for ARMM) size and type</b>		



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### **Degree of protection**

The Adaptors and Reducers, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66.

The Adaptors and Reducers with parallel threads and fitted with sealing rings, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66 / IPX8 to 100 m for 7 days.

The Adaptors and Reducers with tapered threads, fitted with sealing rings and installed in clearance holes, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66 / IPX8 to 100 m for 7 days





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		Female Thread																					
		NPT / NPSM / BSPT / BSPP																					
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"												
Male Thread	Metric	M16	A																				
		M20	A	A	A	A																	
		M25	R	A	A	A																	
		M32	R	R	A	A	A																
		M40	R	R	R	A	A	A															
		M50	R	R	R	R	A	A	A														
		M63	R	R	R	R	R	A	A														
		M75	R	R	R	R	R	R	A	A	A												
		M80	R	R	R	R	R	R	A	A	A												
		M85	R	R	R	R	R	R	R	A	A												
		M90	R	R	R	R	R	R	R	R	A	A	A										
	M100	R	R	R	R	R	R	R	R	R	A	A											
	NPT / NPSM / BSPT / BSPP	1/2"	A*	A	A																		
		3/4"	R*	A*	A	A																	
		1"	R*	R*	A*	A	A																
		1 1/4"	R*	R*	R*	A*	A	A															
		1 1/2"	R*	R*	R*	R*	A	A	A														
		2"	R*	R*	R*	R*	R*	A	A	A													
		2 1/2"	R	R	R	R	R	R	A	A	A												
		3"	R*	R*	R*	R*	R*	R*	R*	R*	A	A	A										
		4"	R*	R*	R*	R*	R*	R*	R*	R*	R*	R*	R*	A	A								
	PG	PG9	A																				
		PG11	A	A	A																		
		PG13.5	A	A	A																		
		PG16	A	A	A	A																	
		PG21	R	A	A	A	A																
		PG29	R	R	A	A	A	A															
		PG36	R	R	R	A	A	A	A														
		PG42	R	R	R	R	R	A	A														
		PG48	R	R	R	R	R	A	A														



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		Female Thread									
		PG									
		PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48	
Male Thread	Metric	M16	A	A	A						
		M20	R	A	A	A	A				
		M25	R	R	R	A	A	A			
		M32	R	R	R	R	A	A	A		
		M40	R	R	R	R	R	A	A	A	
		M50	R	R	R	R	R	R	A	A	A
		M63	R	R	R	R	R	R	R	R	A
		M75	R	R	R	R	R	R	R	R	R
		M80	R	R	R	R	R	R	R	R	R
		M85	R	R	R	R	R	R	R	R	R
		M90	R	R	R	R	R	R	R	R	R
	M100	R	R	R	R	R	R	R	R	R	
	NPT / NPSM / BSPT / BSPP	1/2"	R*	A*	A*	A					
		3/4"	R	R	R	A	A	A			
		1"	R	R	R	R	A	A	A		
		1 1/4"	R	R	R	R	R	A	A	A	
		1 1/2"	R	R	R	R	R	R	A	A	A
		2"	R	R	R	R	R	R	R	R	A
		2 1/2"	R	R	R	R	R	R	R	R	R
		3"	R	R	R	R	R	R	R	R	R
		3 1/2"	R	R	R	R	R	R	R	R	R
		4"	R	R	R	R	R	R	R	R	R
	PG	PG9	A	A	A	A					
		PG11	A	A	A	A	A				
		PG13.5	R	A	A	A	A				
		PG16	R	R	A	A	A	A			
		PG21	R	R	R	R	A	A	A		
		PG29	R	R	R	R	R	A	A	A	
		PG36	R	R	R	R	R	R	A	A	A
		PG42	R	R	R	R	R	R	R	A	A
	PG48	R	R	R	R	R	R	R	R	A	



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**Notes:**

- ) Sira 09ATEX1322X, Sira 09ATEX4323X and IECEX SIR 09.0131X are superseded by certificates CML 19ATEX1090X, CML 19ATEX4092X and IECEX CML 19.0022X.
- ) The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 09ATEX1322X, Sira 09ATEX4323X and IECEX SIR 09.0131X.
- ) Where Sira 09ATEX1322X and/or Sira 09ATEX4323X and/or IECEX SIR 09.0131X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

**12 Certificate history and evaluation reports**

Issue	Date	Associated report	Notes
0	15 Apr 2019	R12298A/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

**13 Conditions of Manufacture**

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Aluminium devices shall not be marked with any information indicating that they are suitable for Group I use.





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#### 14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. Blanking elements shall not be used in conjunction with an adaptor or reducer when installed in a flameproof enclosure.
- ii. The threaded entry component threads without interface O-ring seals that are installed in explosive dust atmospheres, within threaded entries, shall only be fitted into enclosures that have either:
  - ) Parallel entries that ensure that a minimum of 5 full threads of contact will be maintained in accordance with clause 5.1.2 of EN 60079-31:2014.
  - ) Tapered entries that ensure that a minimum of 3.5 full threads of contact will be maintained in accordance with clause 5.1.2 of EN 60079-31:2014.
- iii. Adaptors and Reducers shall not to be used for the direct inter-connection of enclosures.
- iv. Only one adaptor or reducer is to be used with any single cable entry on the associated equipment.
- v. The products are approved for a temperature range at their point of mounting based upon the interface seal:

0	No seal fitted	(-100°C to +400°C)
1	Nitrile O-ring	(-30°C to +100°C)
2	Neoprene O-ring	(-35°C to +90°C)
3	Silicone O-ring	(-60°C to +200°C)
4	Fluorosilicone O-ring	(-55°C to +200°C)
5	Viton O-ring	(-20°C to +180°C)
6	EPDM O-ring	(-50°C to +110°C)

# Certificate Annex

**Certificate Number** CML 19ATEX1090X  
**Equipment** AR, ARMM and ARFF ranges of Adaptors and Reducers  
**Manufacturer** Peppers Cable Glands Limited



The following documents describe the equipment or component defined in this certificate:

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Drawing No	Sheets	Rev	Approved date	Title
PCG/ATX/R-1	1 of 1	2	15 Apr 2019	Reducers Metric (male) to Metric (female)
PCG/ATX/R-2	1 of 1	2	15 Apr 2019	Reducers Metric (male) to NPT/ NPSM/ BSPT/ BSPP (female)
PCG/ATX/R-3	1 of 1	2	15 Apr 2019	Reducers Metric (male) to PG (female)
PCG/ATX/R-4	1 of 1	2	15 Apr 2019	Reducers NPT/ BSPT (male) to Metric (female)
PCG/ATX/R-5	1 of 1	2	15 Apr 2019	Reducers NPT/ BSPT (male) to NPT/ NPSM/ BSPT/ BSPP (female)
PCG/ATX/R-6	1 of 1	2	15 Apr 2019	Reducers NPT/ BSPT (male) to PG (female)
PCG/ATX/R-7	1 of 1	2	15 Apr 2019	Reducers PG (male) to Metric (female)
PCG/ATX/R-8	1 of 1	2	15 Apr 2019	Reducers PG (male) to NPT/ NPSM/ BSPT/ BSPP (female)
PCG/ATX/R-9	1 of 1	2	15 Apr 2019	Reducers PG (male) to PG (female)
PCG/ATX/R-10	1 of 1	2	15 Apr 2019	Reducers NPT/ BSPT (male) to Metric (female) for use with sealing washers
PCG/ATX/R-11	1 of 1	2	15 Apr 2019	Reducers NPT/ BSPT (male) to NPT/ NPSM/ BSPT/ BSPP (female) for use with sealing washers
PCG/ATX/R-12	1 of 1	2	15 Apr 2019	Reducers NPT/ BSPT (male) to PG (female) for use with sealing washers
PCG/ATX/R-13	1 of 1	2	15 Apr 2019	Reducers NPSM/ BSPP(male) to Metric (female) for use with O-rings
PCG/ATX/R-14	1 of 1	2	15 Apr 2019	Reducers NPSM/ BSPP (male) to NPT/ NPSM/ BSPT/ BSPP (female) for use with O-rings
PCG/ATX/R-15	1 of 1	2	15 Apr 2019	Reducers NPSM/ BSPP (male) to PG (female) for use with O-rings
PCG/ATX/A-1	1 of 1	2	15 Apr 2019	Adaptors Metric (male) to Metric (female)
PCG/ATX/A-2	1 of 1	2	15 Apr 2019	Adaptors Metric (male) to NPT/ NPSM/ BSPT/ BSPP (female)
PCG/ATX/A-3	1 of 1	2	15 Apr 2019	Adaptors Metric (male) to PG (female)
PCG/ATX/A-4	1 of 1	2	15 Apr 2019	Adaptors NPT/ BSPT (male) to Metric (female)
PCG/ATX/A-5	1 of 1	2	15 Apr 2019	Adaptors NPT/ BSPT (male) to NPT/ NPSM/ BSPT/ BSPP (female)
PCG/ATX/A-6	1 of 1	2	15 Apr 2019	Adaptors NPT/ BSPT (male) to PG (female)
PCG/ATX/A-7	1 of 1	2	15 Apr 2019	Adaptors PG (male) to Metric (female)
PCG/ATX/A-8	1 of 1	2	15 Apr 2019	Adaptors PG (male) to NPT/ NPSM/ BSPT/ BSPP (female)

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**Certificate Number** CML 19ATEX1090X  
**Equipment** AR, ARMM and ARFF ranges of Adaptors and Reducers  
**Manufacturer** Peppers Cable Glands Limited



Drawing No	Sheets	Rev	Approved date	Title
PCG/ATX/A-9	1 of 1	2	15 Apr 2019	Adaptors PG (male) to PG (female)
PCG/ATX/A-10	1 of 1	2	15 Apr 2019	Adaptors NPT/ BSPT (male) to Metric (female) for use with sealing washers
PCG/ATX/A-11	1 of 1	2	15 Apr 2019	Adaptors NPT/ BSPT (male) to NPT/ NPSM/ BSPT/ BSPP (female) for use with sealing washers
PCG/ATX/A-12	1 of 1	2	15 Apr 2019	Adaptors NPT/ BSPT (male) to PG (female) for use with sealing washers
PCG/ATX/A-13	1 of 1	2	15 Apr 2019	Adaptors NPSM/ BSPP (male) to Metric (female) for use with O-rings
PCG/ATX/A-14	1 of 1	2	15 Apr 2019	Adaptors NPSM/ BSPP (male) to NPT/ NPSM/ BSPT/ BSPP (female) for use with O-rings
PCG/ATX/A-15	1 of 1	2	15 Apr 2019	Adaptors NPSM/ BSPP (male) to PG (female) for use with O-rings
PCG/ATX/AR	1 of 2	3	15 Apr 2019	Adaptor and reducers – part number and markings
PCG/ATX/AR	2 of 2	3	15 Apr 2019	Adaptor and reducers – size tables
PCG/ATX/ARFF	1 of 2	2	15 Apr 2019	Female to female thread adaptor – part number and markings
PCG/ATX/ARMM	1 of 1	4	15 Apr 2019	Male to male thread adaptor – part number and markings
PCG/ATX/ARFF	2 of 2	1	15 Apr 2019	Female to female thread adaptor – dimensions
PCG/ATX/ARMM	2 of 2	1	15 Apr 2019	Female to female thread adaptor – dimensions
PCG/ETOR	1 of 1	12	15 Apr 2019	Entry Thread O-ring seal
PCG/ETRO	1 of 1	3	15 Apr 2019	Entry Thread Components Run Out Specification
PCG/ORGD	1 of 1	6	15 Apr 2019	Component Entry Body O-Ring Groove Detail
PCG/MATS/AL	1 of 1	3	15 Apr 2019	Material specifications – Aluminium
PCG/MATS/SB	1 of 1	5	15 Apr 2019	Material specifications – Brass
PCG/PRE-PLT	1 of 1	2	15 Apr 2019	Pre-plate dimensions
PCG/ATX/PEXMP	1 of 1	4	15 Apr 2019	Marking plan