1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 09ATEX1231X** Issue: **1**

4 Equipment: **HA* compound conduit stopping boxes**

5 Applicant: **Cable Management Products Limited**

6 Address: Station Road
Coleshill
Birmingham
B46 1HT
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007 IEC 60079-31:2008

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

I M2
Ex d e I Mb

Ta = -60°C to +130°C

or

II 2GD
Ex d e IIC Gb
Ex tb IIIC IP66 Db
Ta = -60°C to +130°C

Project Number 20513
C. Index 04

D R Stubbings BA MIET
Certification Manager

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13 **DESCRIPTION OF EQUIPMENT**

HA* Range of Conduit Stopping boxes

The HA* Range of Conduit Stopping boxes are cylindrical metallic assemblies and are intended for use with conduit. They allow the entry of the cable or conductors through conduit into flameproof enclosures without compromising the explosion protection provided by the enclosure, in accordance with relevant codes of practice.

The range comprises three arrangements:

- HA****G1, conduit stopping box for use with flexible, liquid tight conduit
- HA****U, conduit stopping box for use with rigid metal conduit and other threaded fittings
- HA****E, conduit stopping box for use with rigid metal conduit and other threaded fittings with 90° fitting

Description of parts

The HA range, 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 range is suitable for use with conduit and to pass circular, unarmoured wires or cables. All versions of the HA range has the following common parts:

- Entry body, front end of gland with male thread for securing into an associated enclosure. The base of the front thread is fitted with a sealing washer. The front and rear have male threads.
- Silicone O-ring, which fits at the front of the ferrule to provide an ingress seal to the unthreaded flamepath between the entry body and compound pot.
- Compound pot, fits into the entry body, the compound pot body is one part of a two part chamber where a two-part epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath. The compound pot provides a cemented seal for the attached flameproof enclosure.
- Silicone O-ring, which fits over the rear of the compound pot to provide an ingress seal to the unthreaded flamepath between the entry body and ferrule.

The differences between the arrangements are as shown below:

The HA****G1 is fitted with the following additional parts on the rear of the assembly:

- Insert, second part of a two part compound chamber, inserted in rear of compound pot. For flexible liquid tight conduit the insert has helical form on rear for threading on to conduit
- Olive, for clamping of conduit to gland body
- Nut which compresses above parts into entry body

The HA****U is fitted with the following additional parts on the rear of the assembly:

- Insert, second part of a two part compound chamber, inserted in rear of compound pot
- Nut which compresses above parts into entry body. The nut has a female thread on the front and rear, the front female thread attaches to the entry body, the rear thread is for the attachment of rigid metal conduit or other threaded fitting.

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The HA****E is fitted with the following additional parts on the rear of the assembly:

- Insert, second part of a two part compound chamber, inserted in rear of compound pot
- Nut which compresses above parts into entry body. The nut has a female thread on the front and rear, the front female thread attaches to the entry body, the rear thread is for the attachment of rigid metal conduit or other threaded fitting.
- 90° elbow which fits into rear of the nut. The elbow has a male thread on the front and female thread on the rear which are 90° from each other, the front male thread attaches to the nut, a locknut is used as a spacer. The rear thread is for the attachment of rigid metal conduit or other threaded fitting.

The following table details the available thread sizes, maximum number of cores that the gland can accept and the range of acceptable cable sizes for the range.

CABLE GLAND SELECTION TABLE											
Size Ref	CMPL Ref	Entry Thread Size		Cable Acceptance Details Inner Sheath/Cores			Max. Working Length			Hexagon Dimensions	
										Across Flats	Across Corners
		Metric	NPT	Max Over multi cores	Max Over single core	Max No. of cores	Conduit stopping box HA****G1	Universal stopping box HA****U	90° Stopping box HA****E		
16 / 3/8"	HAM*0304	M20	½"	10.5	10.0	9	50 mm	56 mm	90 mm	28.6 mm	31.0 mm
	HAA*0304										
20 / ½"	HAM*0404	M20	½"	13.0	13.0	15	50 mm	56 mm	90 mm	28.6 mm	31.0 mm
	HAA*0404										
25 / ¾"	HAM*0505	M25	¾"	17.9	17.9	28	50 mm	56 mm	104 mm	34.0 mm	37.0 mm
	HAA*0505										
32 / 1"	HAM*0606	M32	1"	24.0	24.0	50	50 mm	56 mm	114 mm	42.0 mm	45.0 mm
	HAA*0606										
40 / 1 ¼"	HAM*0707	M40	1¼"	32.0	32.0	75	57 mm	60 mm	130 mm	50.0 mm	54.0 mm
	HAA*0707										
50 / 1 ½"	HAM*0808	M50	1½"	35.0	35.0	80	58 mm	63 mm	146 mm	60.0 mm	64.0 mm
	HAA*0808										
63 / 2"	HAM*0909	M63	2"	45.0	45.0	100	70 mm	74 mm	169 mm	70.0 mm	76.0 mm
	HAA*0909										

Alternative metallic materials of manufacture:

Brass grades CZ121, CZ122 (leaded brass), CZ112 (Naval brass), CZ114, CZ115 and CZ116 (high tensile brass) and CZ131 to BS EN 12167, BS EN 12168, BS EN 12165 and BS EN 12420

Steel Grade 220 M07
Stainless Steel grades 302S25, 302S31, 303S21, 303S31, 303S41, 303S42, 304S11, 304S15, 304S31, 316S11, 316S13, 316S16, 316S31, 316S33 to BS and EN 10083-1, BS EN 1084, BS EN 10085, BS EN 10087, BS EN 10250-4 and BS EN 10090

All metallic materials may be plated to a maximum thickness of 0.8 µm.

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Product Type Ref:

The product type is derived from the following options:

HA a b cc dd e

a Thread Type
M = Metric
A = NPT

b Material of manufacture
Blank = Brass
M = Nickel Plated
S = Stainless steel

cc Rear thread size
03 = M16 / 3/8" NPT
04 = M20 / ½" NPT
05 = M25 / ¾" NPT
06 = M32 / 1" NPT
07 = M40 / 1 ¼" NPT
08 = M50 / 1 ½" NPT
09 = M63 / 2" NPT

dd Front thread size
04 = M20 / ½" NPT
05 = M25 / ¾" NPT
06 = M32 / 1" NPT
07 = M40 / 1 ¼" NPT
08 = M50 / 1 ½" NPT
09 = M63 / 2" NPT

e Rear section type

G1 = Conduit stopping box for connection to flexible liquid tight conduit
U = Universal stopping box for connection to rigid conduit and fittings
E = 90° Universal stopping box for connection to rigid conduit and fittings

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	18 June 2010	R20513A/00	The release of the prime certificate.
1	23 Jan 2012	R20513A/01	Clarification of description and introduction of additional special condition for safe use for Group I.

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15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 The stopping box shall not be used in enclosures where the temperature, at the point of entry/mounting, is outside of the range -60°C to +130°C.

15.2 The interface seals comply with the requirements of the standards listed in this certificate when the cable glands are fitted to a representative enclosure having a smooth flat mounting surface. In practice the interface between the male thread of the glands and their associated enclosure cannot be defined, therefore it is the users' responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.

15.3 Where the stopping box without sealing ring is installed in protection by enclosure (Ex t) equipment for use in explosive dust atmospheres, it shall only be fitted into enclosures offering a minimum of 5 full threads, with a minimum tolerance of medium or fine according to ISO 965-1 and ISO 965-3 in accordance with IEC 60079-31:2008 clause 5.1.1.

15.4 The conduit stopper box is designed for use in group I applications where the installed cable is compliant with the requirements of the local code of practice and the conduit provides additional mechanical protection only.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

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