



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEx CML 21.0012X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 2	<a href="#">Issue 1 (2022-03-31)</a> <a href="#">Issue 0 (2021-09-29)</a>
Date of Issue:	2023-05-25		
Applicant:	<b>Hawke International</b> A Division of Hubbell Limited A Member of the Hubbell Group of Companies Oxford Street West Ashton-under-Lyne, Lancashire OL7 0NA <b>United Kingdom</b>		
Equipment:	<b>Ranges of Compression Seal, Diaphragm Seal, Hybrid and Barrier Cable Glands</b>		
Optional accessory:			
Type of Protection:	<b>Restricted Breathing Ex nR</b>		
Marking:	Ex nR IIC Gc  See conditions of use and/or Product Description for service temperature range.		

Approved for issue on behalf of the IECEx  
Certification Body:

**S. Roumbedakis**

Position:

**Technical Manager**

Signature:  
(for printed version)

Date:  
(for printed version)

2023-05-25

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Page 2 of 4

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Manufacturer: **Hawke International**  
A Division of Hubbell Limited  
A Member of the Hubbell Group of Companies  
Oxford Street West  
Ashton-under-Lyne, Lancashire  
OL7 0NA  
**United Kingdom**

Manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-15:2017](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"  
Edition:5.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/CML/ExTR21.0018/00](#)

[GB/CML/ExTR21.0316/00](#)

[GB/CML/ExTR23.0002/00](#)

Quality Assessment Report:

[GB/BAS/QAR06.0061/10](#)



# IECEx Certificate of Conformity

Certificate No.: **IECEx CML 21.0012X**

Page 3 of 4

Date of issue: 2023-05-25

Issue No: 2

**EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

Refer to certificate annex for full product description

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

Refer to certificate annex for specific conditions of use



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Certificate No.: **IECEx CML 21.0012X**

Page 4 of 4

Date of issue: 2023-05-25

Issue No: 2

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

### Issue 1

This Issue introduced the following changes (and is applicable to Type PSG 553 RAC Cable Gland and Type SB474 Conduit Stopping Gland).

1. To introduce a new seal design for PSG/553/RAC, sizes Os to C and SB 474, sizes O to C; as a result the product description was amended.
2. To introduce a new compressible seal which has an increased service temperature of -60°C to +100°C; to reflect this modification the product description and Specific Conditions of Use were updated.
3. To permit minor editorial updates to the Product Description.
4. To permit changes to the Specific Conditions of Use.
5. To remove cable gland types 501/452 RAC and PSG 421; as a result, the product description was amended.

### Issue 2

This variation introduced the following changes:

1. To introduce the APEX Range of Cable Glands to the certificate.
2. To permit minor editorial updates to the Product Description.
3. To permit changes to the Specific Conditions of Use.

### Annex:

[IECEx CML 21.0012X - Certificate Annex Issue 2\\_1.pdf](#)

**Annexe to:** IECEx CML 21.0012X Issue 2

**Applicant:** Hawke International (A Division of Hubbell Limited) (A member of the Hubbell Group of Companies)

**Apparatus:** Ranges of Compression Seal, Diaphragm Seal, Hybrid, and Barrier Cable Glands

## Description

The ranges of cable glands are designed in three versions: compression seal, barrier seal and diaphragm seal. Hybrid configurations of these glands are also described. The range of glands can alternatively be constructed with specified entry threads.

All cable glands within the ranges are manufactured in brass, nickel plated brass, stainless steel, or aluminium.

Both barrier and diaphragm seal type glands internal parts marked with an asterisk (\*) in the description below are interchangeable with respect to the type of application. When parts are interchanged, these assemblies may be dual marked with both product types on the stamp band. The "DELUGE BOOT" colour indicates the internal component that is used, the ICG/653/UNIV being indicated by a red deluge boot, The gland assemblies as described above are rated for ingress protection IP66, 67, 69 and IPX8 size Os to C only at 10m for 24 hours. The ingress protection of the ICG 653 UNIV and CSB656N is limited to IP66.

Cable glands may be fitted with an optional external clamp or a Hawke Gland Mounted Clamp (GMC) accessory. When fitted, no additional clamping is required.

Items in *italic* are optional and may be omitted from the cable gland dependent on the application.

Hybrid cable glands are available for the gland types ICG/653/UNIV, 501/453/RAC and 501/453/UNIV. These types are fitted with the middle nut and back nut components of any smaller trade size compared to the entry. Glands may combine entries and seals with small armour clamping rings and back nut seals. Hybrid gland marking to include second size reference with no spaces e.g. for example C2 to C hybrid size reference would be C2C.

The use of Hawke IP sealing washers may be considered a suitable sealing method to maintain IP rating to the enclosure (see conditions of use) and will maintain the service temperature.

Where marked IIC or IIIC, the equipment can also be marked for gas groups IIA or IIB and for dust groups IIIA or IIIB.



Certificate Annex IECEx  
Version: 9.0 Approval: Approved

### **Type 501/453/UNIV Cable Gland**

501/453/UNIV cable gland is a diaphragm seal cable gland the glands are fitted with a diaphragm silicone rubber seal and are designed for effectively filled type cable when used for flameproof applications. This cable gland is available in sizes Os (M16) up to and including F(M75). The entry thread form can either be metric or NPT equivalent. They are used with cables that are circular and armoured, un-armoured or braided cables. The cable gland comprises the following components:

- a) Entry
- b) Deluge seal \*
- c) Diaphragm seal \*
- d) Spigot \*
- e) Armour clamping ring
- f) Middle nut
- g) Back nut
- h) Back nut clamp
- i) Back nut seal

### **Type ICG/653/UNIV Cable Gland**

The ICG/653/UNIV Cable Gland is a barrier seal type gland designed for sealing around individual cores and are for use with circular cables of armoured, un-armoured or corrugated cables. This cable gland is available in sizes Os (M16) up to and including J (M100). The entry thread form is either metric or NPT equivalent. The cable gland comprises the following components:

- a) Entry
- b) Deluge seal\*
- c) Silicone compound chamber\*
- d) *Silicone resin dam* \*
- e) Spigot\*
- f) *VBL Clip* \*
- g) Armour/braid clamping ring
- h) Middle nut
- i) Back nut
- j) Back nut clamp
- k) Back nut seal

### **Type 710 Cable Gland**

The 710 Cable gland is a barrier cable gland designed for sealing around individual cores and are for use with circular cables of armoured, un-armoured or corrugated cables. This cable gland is available in sizes Os (M16) up to and including F (M75). The entry thread form is either metric or NPT equivalent. The cable gland comprises the following components:

- a) Entry
- b) Silicone compound chamber
- c) Deluge seal
- d) *Silicone resin dam*
- e) Spigot
- f) Middle nut
- g) Back nut
- h) Back nut clamp
- i) Back nut seal

### **Type 711 Cable Gland**

711 Cable gland is a barrier cable gland designed for sealing around individual cores and are for use with circular cables of armoured, un-armoured or corrugated cables. This cable gland is available in sizes A (M20) up to and including F (M75). The entry thread form is either metric or NPT equivalent. The cable gland comprises the following components:

- a) Entry
- b) Silicone compound chamber
- c) Deluge seal
- d) Silicone resin dam
- e) Front diablo support
- f) Diablo cage
- g) Rear diablo support
- h) Middle nut
- i) Back nut
- j) Back nut clamp
- k) Back nut seal

### **Type 753 Cable Gland**

753 cable gland Cable gland is a barrier cable gland designed for sealing around individual cores and are for use with circular cables of armoured, un-armoured or braided cables. This cable gland is available in sizes Os (M16) up to and including F(M75). The entry thread form is either metric or NPT equivalent. The cable gland comprises the following components:

- a) Entry
- b) Silicone compound chamber
- c) Deluge seal
- d) Silicone resin dam
- e) Spigot
- f) Middle nut
- g) Back nut
- h) Back nut clamp
- i) Back nut seal

Cable glands types ICG/653/UNIV, 710, 711 and 753 have been subjected to overpressure test up to 62bar/900 Psi.

### **Type 501/421 Cable Gland**

The Type 501/421 Cable Gland is intended for use with an effectively filled and circular unarmoured cable. The gland type is rated for ingress protection IP66 and 67. This cable gland is available in sized Os (M16) up to including J (M100). The entry thread form is either metric or NPT equivalent. It comprises the following components:-

- a) An entry
- b) A compressible sealing ring
- c) A compression spigot
- d) A back nut
- e) An optional earth continuity device for use with metallic sheathed cables

### **The Type 501/421 'Size 2K' gland**

The Type 501/421 'Size 2K' gland comprises the following components only: -

- a) A dedicated entry component
- b) A compressible sealing ring
- c) A nylon skid washer
- d) A threaded compression spigot



### **Type 501/423 Cable Gland**

The Type 501/423 Cable Gland is intended for use with an effectively filled and circular unarmoured cable. The gland type is rated for ingress protection IP66 and 67. This cable gland is available in sized Os (M16) up to including J (M100). The entry thread form is either metric or NPT equivalent. It comprises the following components:-

- a) An entry
- b) Two compressible sealing rings
- c) Two compression spigots
- d) A middle nut
- e) A back nut
- f) An optional earth continuity device for use with metallic sheathed cables

### **Type 501/453 RAC Cable Gland**

The Type 501/453 RAC Cable Gland is intended for use with armoured, unarmoured, or braided cable. The gland type is rated for ingress protection IP66 and 67. This cable gland is available in sized Os (M16) up to including J (M100). The entry thread form is either metric or NPT equivalent. It comprises the following components: -

- a) An entry
- b) A compressible sealing ring
- c) A combined compression spigot and armour clamping cone
- d) A reversible armour clamping ring. (When fitted with a dedicated armour, or braid, clamping ring the gland type is 501/453).
- e) A middle nut
- f) An outer seal assembly (sleeve seal and support ring)
- g) A back nut
- h) An optional earth continuity device for use with metallic inner sheathed cables.

### **Type PSG 553 RAC Cable Gland**

The Type PSG 553 RAC Cable Gland is intended for use with armoured, unarmoured, or braided cable of unspecified construction. The gland type is rated for ingress protection IP66 and 67. This cable gland is available in sized Os (M16) up to including C (M32). The entry thread form is either metric or NPT equivalent. It comprises the following components: -

- a) An entry
- b) A compressible seal designed to accept a number of individual conductors
- c) A combined compression spigot and armour clamping cone.
- d) A reversible armour clamping ring. (When fitted with a dedicated armour, or braid, clamping ring the gland type is PSG 553).
- e) A middle nut
- f) An outer seal assembly (sleeve seal and support ring)
- g) A back nut

### **Type 501/414 Conduit Stopping Gland**

The Type 501/414 Conduit Stopping Gland is intended for use with an effectively filled and circular unarmoured cable enclosed within a conduit. The gland type is rated for ingress protection IP66 and 67. This cable gland is available in sized Os (M16) up to including F (M75). The entry thread form is either metric or NPT equivalent. It comprises the following components: -

- a) An entry
- b) A compressible sealing ring
- c) A compression assembly comprising a compression spigot with a female thread at the rear and integral back nut

### **Type SB474 Conduit Stopping Gland**

The Type SB474 Conduit Stopping Gland is intended for use with a number of circular conductors enclosed within a conduit. The gland type is rated for ingress protection IP66 and 67. This cable gland is available in sized O (M16) up to including C (M32). The entry thread form is either metric or NPT equivalent. It comprises the following components: -

- a) An entry
- b) A compressible seal designed to accept a number of individual conductors
- c) A compression assembly comprising a compression spigot with a female thread at the rear and integral back nut

### **Type CSB 656N Conduit Stopping Gland**

The Type CSB 656N Conduit Stopping Gland is intended for use with a number of circular conductors enclosed within a conduit or retained by a separate cable gland. The gland type is rated for ingress protection IP66. This cable gland is available in sized A (M20) up to including F (M75). The entry thread form is either metric or NPT equivalent. It comprises the following components: -

- a) An entry
- b) An elastomeric ferrule
- c) An epoxy barrier compound
- d) A compression assembly comprising a compression spigot with a female thread at the rear
- e) A dedicated backnut

### **APEX Range of Cable Glands**

The Hawke **APEX C\*e** Range of Cable Glands are designed to form a seal around the outer sheath of a cable and are intended for use with a range of circular cables including armoured, non armoured and braided cables. The gland type includes an integral armour/braid grounding device. The suitable service temperature is -60°C to +130°C.

These cable glands are manufactured in brass, or stainless steel; all of which may be plated to suit the application. The glands may be provided with metric or imperial (NPT) entry threads. The gland type is rated for ingress protection IP66 and 67. These cable glands are available in sizes Os (M16) up to including F (M75). The glands utilise thermoset rubber seals.

The Hawke APEX C\*e cable gland is comprised of the following components:

1. Entry
2. Deluge Boot
3. Armour Clamping Ring(s)
4. Middlednut
5. Compression Seal
6. Slip Ring
7. Backnut

APEX C\*e is provided with configurable armour clamping options, typically marked with either CUe, CXe or CW e where:

- U = suits all types of Braid, Tape and Wire Armour
- X = generally suits Braid and Tape
- W = generally suits Wire Armour

All variants of the APEX C\*e are suitable for installation onto unarmoured circular cable and are dimensionally identical with the exception of the type of ring supplied.

The Hawke **APEX A2F** Range of Cable Glands are designed to form a seal around the outer sheath of a cable and are intended for use with circular non armoured and braided cables.

The Hawke **APEX E1F\*** Range of Cable Glands are designed to form a seal around both the inner and outer sheath of the cable and are intended for use with a range of circular cables including armoured, non armoured and braided cables. This gland type includes an integral armour/braid grounding device.

Both type of glands have a suitable service temperature of -60°C to +130°C.

The cable glands listed above may be manufactured in brass, or stainless steel; all of which may be plated to suit the application. The glands may be provided with metric or imperial (NPT) entry threads. The gland assemblies as described above are rated for ingress protection of IP66/67.

These cable glands are available in sizes Os (M16) up to including F (M75). The glands utilise thermoset rubber seals.

The Hawke APEX A2F cable gland is comprised of the following components:

1. Entry
2. Compression Seal
3. Slip ring
4. Tailnut

The Hawke APEX E1F\* cable gland is comprised of the following components:

1. Entry
2. Deluge Boot (Optional)
3. Inner Compression Seal
4. Spigot
5. Armour Clamping Ring(s)
6. Middlednut
7. Outer Compression Seal
8. Slip Ring
9. Backnut

The APEX E1F\* is provided with configurable armour clamping options, typically marked with either E1FU, E1FX or E1FW where:

- U = suits all types Braid, Tape and Armour
- X = generally suits Braid and Tape
- W = generally suits Wire Armour

All variants of the APEX E1F\* are suitable for installation onto unarmoured circular cable and are dimensionally identical with the exception of the type of ring supplied.

## Conditions of Manufacture

None.

## Specific Conditions of Use

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

- i. Glands for use with conduit, unarmoured or braided cables are only suitable for fixed installations, the cable for which must be effectively clamped to prevent pulling and twisting (does not apply when fitted with rear clamping device or Hawke Gland Mounted Clamp (GMC)).
- ii. Barrier glands of sizes C2, D, E and F and containing (Express) XO99-41-2 resin, and when fitted with unarmoured or braided cables, shall be effectively clamped to prevent pulling or twisting forces transmitting to the terminations. No additional clamping is required on barrier cable glands sizes Os-C2, or if containing 2122 Hawke seal or 2132 QSP compound.
- iii. The PSG/553/RAC and SB 474 cable glands are limited to an operating temperature range of -60°C to +80°C, unless marked "P PSG/553/RAC" and "P SB 474" respectively. In these cases, they are suitable for use with an operating temperature range of -60°C to +100°C. All other cable gland types are suitable for use with an operating temperature range of -60°C to +100°C.
- iv. When the glands are used for restricted breathing Ex nR, the entry thread shall be suitably sealed (in accordance with IEC 60079-14) to maintain the ingress protection rating of the associated enclosure. This condition does not apply if the Hawke International nylon sealing washer is installed as part of the gland assembly.

## Components covered by Ex Certificates issued to older editions of Standards

None