



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

Certificate No.: **IECEX CES 19.0013X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2019-10-25

Applicant: **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

Equipment: **Cable glands, 501/455/USGW., 501/455/USG.. and 501/455/USGX.. series**

Optional accessory:

Type of Protection: **Flameproof enclosures 'd'; increased safety 'e'; Dust ignition protection 't'**

Marking: **Ex db IIC Gb**
Ex eb IIC Gb
Ex tb IIIC Db
IP66/68

PAD B9020046 (2695302) - USO AZIENDALE

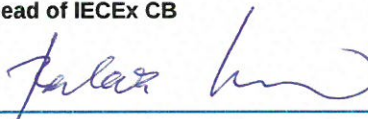
Approved for issue on behalf of the IECEx
Certification Body:

Mirko Balaz

Position:

Head of IECEx CB

Signature:
(for printed version)


25-10-2019

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy

CESI




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Manufacturer: **Hawke International**
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Additional
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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
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 Report:

[IT/CES/ExTR19.0005/00](#)

Quality Assessment Report:

[GB/BAS/QAR06.0061/07](#)



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Certificate No.: **IECEx CES 19.0013X**

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Date of issue: 2019-10-25

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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Cable glands 501/455/USGW**, 501/455/USG** and 501/455/USGX** series are suitable for inserting circular cables into Ex db enclosures having threaded entries and Ex eb or Ex tb enclosures having either threaded or plane entries. Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. An elastomeric inner diaphragm ring is used to realize sealing between the cable and the gland body. To prevent pulling or twisting forces being transmitted to the conductor connections, the cable glands retain the cable armour or the cable braid by specific clamping device. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.

All the types are admitted for temperature range of use from -60°C up to +80°C.

The cable glands characteristics are further described in the Annexe of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The coupling of the cable glands with the enclosures shall be made as indicated by the manufacturer in the documents annexed to this certificate in order to respect the type of protection of the electrical apparatus on which cable glands are mounted.
- The cable glands shall be mounted at the electrical apparatus in such a way that accidental rotation and loosening will be prevented.
- The cable glands 501/455/USGW ** type are for steel wire armoured cables only.
- The cable glands 501/455/USG** type are for steel wire armoured cables, shielded or braided cables.
- The cable glands 501/455/USGX** type are for shielded or braided cables only.
- The cable glands 501/455/USG** for use with shielded or braided cables and cable glands 501/455/USGX** are only suitable for fixed installations. The cables must be effectively clamped to prevent pulling and twisting.
- The cable glands shall be installed in such a way that the temperature at the mounting point will remain within the service temperature ranges accordingly to the marking.
- The degree of protection IP 66/68 according to the IEC 60529 standard will be guaranteed for the cable glands if the holes into which cable glands are mounted are suitably sealed. To this scope the correct positioning of the gaskets (for cylindrical threads) or the application of sealant on the threads (for tapered threads), shall be done as indicated in the manufacturer instruction.

Annex:

[IECEx CES 19.0013X ANNEX- 501-455-USGW_USG_USGX-HAWKE.pdf](#)



IECEx Certificate of Conformity



Prot: B9020046

Annex to certificate: IECEx CES 19.0013X Issue No.:0 of 2019-10-25
Applicant: 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
Apparatus: Cable Glands, series 501/455/USGW**, 501/455/USG** and 501/455/USGX**

Description of the equipment:

The Cable glands 501/455/USGW**, 501/455/USG** and 501/455/USGX** series (commercial gland family named USG), are suitable for inserting circular cables into Ex db enclosures having threaded entries and Ex eb or Ex tb enclosures having either threaded or plane entries. Attachment of the glands to an enclosure is by means of the male threaded portion on the male body. An elastomeric inner diaphragm ring is used to realize sealing between the cable and the gland body. To prevent pulling or twisting forces being transmitted to the conductor connections, the cable glands retain the cable armour or the cable braid by specific clamping device. Ingress protection of IP66/68 (50 m for 30 min.) is maintained when the glands are installed in accordance with the manufacturer's instructions.

All the types are admitted for temperature range of use from -60°C up to +80°C.

The Cable glands 501/455/USGW types are designed for steel wire armoured cables while 501/455/USG** types are designed for steel wire armoured, shielded and braided cables and 501/455/USGX** types are designed for shielded cables only.**

The Cable glands 501/455/USGW**, 501/455/USG** and 501/455/USGX** series are comprised of a male lower body, upper body, Union diaphragm seal and lower insert, grounding cone, reversible braid ring for type 501/455/USG** or shielding cone for type 501/455/USGX** both used for shielded and braided cables, braid ring, Silicon O-Ring seal and a cap. The elastomeric inner diaphragm seal realizes the pressure on the cable sheath. Armoured cable clamping: when the upper body is screwed onto the lower body, the armour of the cable is clamped between the grounding cone and the braid ring.

Braided cable clamping (501/455/USG** and 501/455/USGX** types only): when the upper body is screwed onto the lower body, the braid of the cable is clamped between the grounding cone and the reversible braid ring (501/455/USG** types only) or between the shielding cone (501/455/USGX** types only) and the braid ring. The lower insert allows the diaphragm seal to expand elastically according the inserted cable diameter.

Cable glands 501/455/USGW**, 501/455/USG** and 501/455/USGX** series mounting threads are cylindrical ISO Metric 965/1 and ISO 965/3 from M16x1.5 up to M100x1.5 and tapered series NPT ANSI/ASME B1.20.1 from 3/8" up to 4".

To guarantee the IP 66/68 degree of protection the Cable glands 501/455/USGW**, 501/455/USG** and 501/455/USGX** series with cylindrical threads use a Silicon flat washer placed in-between the male threaded gland body and the enclosure wall, while for all other threads the IP 66/68 degree of protection is achieved with sealant put at least on two complete threads engaged of the threaded coupling.

The Cable glands are generally made in Brass (CuZn39Pb3 EN 12164). The following alternative materials can be supplied on demand:

- Nickel-plated Brass type CuZn39Pb3 EN 12164.
- Stainless steel type AISI316; AISI304; AISI303.

The cable glands should be also used for intrinsically safe circuits Ex i and should have a part painted in light blue.

Ambient/service temperature ranges:

All the models are admitted for use within: - 60°C ÷ + 80 °C.

Prot: B9020046

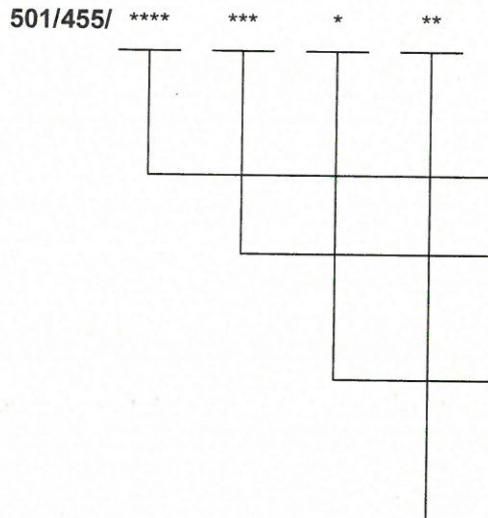
Annex to certificate:
Applicant:

IECEx CES 19.0013X Issue No.:0 of 2019-10-25
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

Apparatus:

Cable Glands, series 501/455/USGW, 501/455/USG** and 501/455/USGX****

Identification of Cable glands 501/455/USGW**, 501/455/USG** and 501/455/USGX** series:



Code that identifies the series and type

- **USGW**: for steel wire armoured cables
- **USG**: for steel wire armoured, shielded or braided cables
- **USGX**: for shielded or braided cables

Code that identifies the thread size and clamping range
(see Table 1)

Type of thread:

- **M**: ISO 261 pitch 1.5
- **N**: NPT ANSI/ASME B1.20.1

Manufacturing material:

- **None**: brass
- **NP**: nickel-plated brass
- **SS**: stainless steel

Types and thread sizes of cable glands are listed on the followings Table 1.

Table 1:

Code		Thread size		Cable Dia. ranges (mm)	
For ISO thread	For (NPT) thread	ISO pitch 1.5	NPT	Inner sheath	Armour sheath
O/M16	O/3/8"NP	M 16	3/8"	6-11	9-16
O/M20	O/1/2"NP	M 20	1/2"	6-11	9-16
A/M20	A/1/2"NP	M 20	1/2"	8.5-14.5	12-20
BA/M25	BA/3/4"NP	M 25	3/4"	8.5-14.5	12-20
B/M25	B/3/4"NP	M 25	3/4"	12-20	16-26
CB/M32	CB/1"NP	M 32	1"	12-20	16-26
C/M32	C/1"NP	M 32	1"	17-26	20-33
C2C/M40	C2C/1 1/4"NP	M 40	1 1/4"	17-26	20-33
C2/M40	C2/1 1/4"NP	M 40	1 1/4"	23-32	29-41
DC2/M50	DC2/1 1/2"NP	M 50	1 1/2"	23-33	29-41
D/M50	D/1 1/2"NP	M 50	1 1/2"	29-41	36-52
ED/M63	ED/2"NP	M 63	2"	29-41	36-52
E/M63	E/2"NP	M 63	2"	44-56	50-65
FE/M75	FE/2 1/2"NP	M 75	2 1/2"	44-56	50-65
F/M75	F/2 1/2"NP	M 75	2 1/2"	54.5-68	61-78
GF/M80	GF/3"NP	M 80	3"	54.5-68	61-78
G/M80	G/3"NP	M 80	3"	67-73	75-89
H/M90	H/3 1/2"NP	M 90	3 1/2"	67-77	75-89
J/M100	J/4"NP	M 100	4"	75-91	88-104