



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEX CML 18.0131X Issue No: 0 Certificate history:  
Issue No. 0 (2019-05-10)

Status: **Current**

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Date of Issue: **2019-05-10**

Applicant: **Hawke International (A Division of Hubbell Limited) (A Member of the Hubbell group of companies)**  
Oxford Street West  
Ashton under Lyne  
OL7 0NA  
**United Kingdom**

Equipment: **Ranges of Barrier and Diaphragm Seal Hybrid Cable Glands – Type ICG 653/UNIV  
710/711/753 and 501/453/UNIV**

*Optional accessory:*

Type of Protection: **Flameproof; Increased Safety; Dust**

Marking:

Ex db IIC Gb  
Ex eb IIC Gb  
Ex tb IIIC Db

Tamb = -60°C to +80°C (501/453UNIV – ICG 653 UNIV)

Tamb = -50°C to +80°C (710/711/753 )

*Approved for issue on behalf of the IECEX  
Certification Body:*

A C Smith

*Position:*

Technical Operations Director

*Signature:  
(for printed version)*

*Date:*

2019-05-10

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 the [Official IECEX Website](http://www.iecex.com).

Certificate issued by:

**Certification Management Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





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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  
OL7 0NA  
**United Kingdom**

Additional Manufacturing location(s):

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 apparatus 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:

<b>IEC 60079-0 : 2017</b> Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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:

[GB/CML/ExTR18.0186/00](#)

Quality Assessment Report:

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



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The ranges of cable glands are designed in two versions: barrier and diaphragm seal. A further version which is a hybrid of the barrier and diaphragm seal glands is included.

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

*(Refer to Annex for full cable glands description.)*

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

1. Cable glands of type 501/453/UNIV, when fitted with unarmoured cables, shall be provided with an additional clamping device to prevent pulling or twisting forces transmitting to the terminations.
2. Cable glands of sizes D, E and F and containing XO99-41/2 resin, when fitted with unarmoured cables, shall be provided with an additional clamping device to prevent pulling or twisting forces transmitting to the terminations.
3. The ICG 653 UNIV, 501/453 UNIV cable glands when fitted with cold shrink on the cable outer sheath of specific cable types, the assembly instruction shall be implemented with Hawke drawing No. 320000 for those particular cable types.

### Annex:

[Certificate Annex IECEx CML 18.0131X Issue 0.pdf](#)



**Annexe to:** IECEx CML 18.0131X Issue 0  
**Applicant:** Hawke International  
 (A Division of Hubbell Limited)  
 (A Member of the Hubbell group of companies)  
**Apparatus:** Ranges of Barrier and Diaphragm Seal  
 Hybrid Cable Glands – Type ICG  
 653/UNIV 710/711/753 and 501/453/UNIV

**Description**

The ranges of cable glands are designed in two versions: barrier and diaphragm seal. A further version which is a hybrid of the barrier and diaphragm seal glands is included.

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

The glands comprising the following components:

ICG 653/UNIV Barrier Cable Glands	501/453/UNIV Diaphragm Seal Cable Glands	711 Barrier Cable Glands	753 Barrier Cable Glands	710 Barrier Cable Glands
J IP washer	J IP washer	J IP washer	J IP washer	J IP washer
J Entry nut	J Entry nut	J Entry nut	J Entry nut	J Entry nut
J *Deluge seal	J *Deluge seal	J Compound pot	J Compound pot	J Compound pot
J *Silicone pot	J *Diaphragm seal	J Deluge seal	J Deluge seal	J Deluge seal
J *Silicone resin	J *Spigot	J Compound	J Compound	J Compound
barrier	J Clamping ring	barrier	barrier	barrier
J *Spigot	J Middle nut	J Front diablo	J Spigot	J Spigot
J *Wire VBL clip	J Back nut	support	J Clamping ring	J Middle nut
J Clamping ring	J Back nut clamp	J Diablo	J Middle nut	J Back nut
J Middle nut	J Back nut seal	J Rear diablo	J Back nut	J Back nut clamp
J Back nut		support	J Back nut clamp	J Back nut seal
J Back nut clamp		J Middle nut	J Back nut seal	
J Back nut seal		J Back nut		
		J Back nut clamp		
		J Back nut seal		

**Barrier Seal Type Cable Glands**

The barrier seal type cable glands are of the types: ICG/653/UNIV, 710, 711 and 753.

They are designed for sealing around individual cores and are for use with circular cables of armoured, un-armoured or corrugated cables.

The gland's internal parts marked with an asterisk in the table above 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 stamping 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 at 30m for 7 days (special instructions required).

Unit 1, Newport Business Park  
 New Port Road  
 Ellesmere Port  
 CH65 4LZ

T +44 (0) 151 559 1160  
 E info@cmllex.com

[www.cmllex.com](http://www.cmllex.com)

Company Reg No. 8554022 VAT No. GB163023642





## Diaphragm Seal Type Cable Glands

The diaphragm seal type cable glands are of type 501/453/UNIV.

The glands are fitted with a diaphragm silicone rubber seal and are designed for effectively filled type cable when used for flameproof applications. They are for use with cables that are circular and armoured or un-armoured.

The gland's internal parts marked with an asterisk in the table above 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 stamping band. The 'deluge boot' colour indicates the internal component that is used, the 501/453/UNIV being indicated by a black deluge boot. The gland assemblies as described above are rated for ingress protection IP66, 67, 69 and IPX8 at 30m for 7 days (special instructions required).

## Hybrid Glands

Hybrid cable glands are available for the cable gland types ICG 653/UNIV and 501/453/UNIV. These are fitted with the middle nut and back nut components of one gland size smaller in order to accommodate smaller size cables.

### ICG 653/UNIV and 501/453 UNIV specifications

SIZE REF.	THREAD SIZES		ICG/653/UNIV					501/453/UNIV			
	Metric	NPT	MAX INNER SHEATH DIA		MAX OVER CORES DIA	MAX QTY OF CORES	MAX QTY OF FIBRE	INNER SHEATH		OUTER SHEATH	
			STD	LEAD				MIN	MAX	MIN	MAX
O	M20	1/2"	8.1	8.0	8.0	12	48	3.5	8.1	5.5	12.0
Os	M20	1/2"	11.7	10.2	8.8	12	48	6.5	11.4	9.5	16.0
A	M20	1/2"	14.0	12.5	10.8	15	72	8.4	14.3	12.5	20.5
		3/4"									
B	M25	3/4"	19.9	18.0	15.9	30	144	11.1	19.7	16.9	26.0
		1"									
C	M32	1"	26.2	24.3	21.9	42	/	17.6	26.5	22.0	33.0
		1 1/4"									
C2	M40	1 1/4"	32.3	30.3	26.7	60	/	23.1	32.5	28.0	41.0
		1 1/2"									
D	M50	2"	44.2	41.9	37.7	80	/	28.9	44.4	36.0	52.6
E	M63	2 1/2"	56.0	52.9	49.0	100	/	39.9	56.3	46.0	65.3
F	M75	3"	68.0	64.9	59.8	120	/	50.5	68.2	57.0	78.0



### ICG 653/UNIV and 501/453 Hybrid specifications

SIZE REF.	THREAD SIZES 'M'		ICG/653/UNIV HYBRID							501/453/UNIV HYBRID			
			MAX INNER SHEATH DIA		MAX OVER CORES DIA	MAX QTY OF CORES	MAX QTY OF FIBRE	OUTER SHEATH		INNER SHEATH		OUTER SHEATH	
	Metric	NPT	STD	LEAD				MIN	MAX	MIN	MAX	MIN	MAX
A / Os	M20	1/2"	14.0	12.5	10.8	15	72	MIN	MAX	8.4	14.3	5.5	12.0
		3/4"						5.5	12.0				
A / O	M20	1/2"	14.0	12.5	10.8	15	72			8.4	14.3	9.5	16.0
		3/4"						9.5	16.0				
B / A	M25	3/4"	19.9	18.0	15.9	30	144			11.1	19.7	12.0	20.5
		1"						12.0	20.5				
C / B	M32	1"	26.2	24.3	21.9	42				17.6	26.5	16.9	26.0
		1 1/4"						16.9	26.0				
C2 / C	M40	1 1/4"	32.3	30.3	26.7	60				23.1	32.5	22.0	33.0
		1 1/2"						22.0	33.0				
D / C2	M50	2"	44.2	41.9	37.7	80				28.9	42.3	28.0	41.0
								28.0	41.0		44.4		
E / D	M63	2 1/2"	56.0	52.9	49.0	100				39.9	54.3	36.0	56.6
								36.0	56.6		56.3		
F / E	M75	3"	68.0	64.9	59.8	120				50.5	65.3	46.0	65.3
								46.0	65.3		68.2		

### Gland Type 710 specifications

SIZE REF.	THREAD SIZES		CABLE ACCEPTANCE DETAILS					CABLE ACCEPTANCE DETAILS				
			INNER SHEATH		CORES		OUTER SHEATH		INNER SHEATH	MAX. NO. OF CORES	OUTER SHEATH	
	Metric	NPT	MIN	MAX	MAX OVER CORES	MAX. NO. OF CORES	MIN	MAX			MAX	MIN
Os	M20	1/2"	0.14"	0.32"	0.31"	12	0.22"	0.47"	0.39"	6	0.22"	0.47"
O	M20	1/2"	0.26"	0.46"	0.35"	12	0.37"	0.63"	0.39"	6	0.37"	0.63"
A	M20	1/2"	0.33"	0.55"	0.43"	15	0.49"	0.81"	0.49"	10	0.49"	0.81"
		3/4"										
B	M25	3/4"	0.44"	0.78"	0.63"	30	0.67"	1.02"	0.72"	21	0.67"	1.02"
		1"										



SIZE REF.	THREAD SIZES		CABLE ACCEPTANCE DETAILS						CABLE ACCEPTANCE DETAILS			
			INNER SHEATH		CORES		OUTER SHEATH		INNER SHEATH	MAX. NO. OF CORES	OUTER SHEATH	
	MAX OVER CORES	MAX. NO. OF CORES			MIN	MAX						
			Metric	NPT			MIN	MAX	MIN	MAX	MAX	MIN
C	M32	1"	0.69"	1.03"	0.86"	42	0.87"	1.3"	0.97"	42	0.87"	1.3"
		1 1/4"										
C2	M40	1 1/4"	0.91"	1.27"	1.05"	60	1.1"	1.61"	1.17"	60	1.1"	1.61"
		1 1/2"										
D	M50	1 1/2"	1.14"	1.74"	1.48"	80	1.42"	2.07"	1.64"	80	1.42"	2.07"
		2"										
E	M63	2"	1.57"	2.2"	1.93"	100	1.81"	2.57"	2.11"	100	1.81"	2.57"
		2 1/2"										
F	M75	2 1/2"	1.99"	2.68"	2.35"	120	2.24"	3.07"	2.57"	120	2.24"	3.07"
		3"							2.61"			



### Gland Type 711 specifications

SIZE REF	THREAD SIZES Parallel Threads are medium fit or better		CABLE ACCEPTANCE DETAILS						CABLE ACCEPTANCE DETAILS			
			INNER SHEATH		CORES		OUTER SHEATH		INNER SHEATH	MAX. NO. OF CORES	OUTER SHEATH	
	MAX OVER CORES	MAX. NO. OF CORES			MIN	MAX						
	Metric	NPT	MIN	MAX			MIN	MAX	MAX		MIN	MAX
A	M20	1/2"	0.41"	0.55"	0.43"	15	0.49"	0.81"	0.64"	10	0.49"	0.81"
		3/4"										
B	M25	3/4"	0.49"	0.78"	0.63"	30	0.67"	1.02"	0.94"	21	0.67"	1.02"
		1"										
C	M32	1"	0.85"	1.02"	0.86"	42	0.87"	1.3"	1.24"	42	0.87"	1.3"
		1 1/4"										
C2	M40	1 1/4"	1.17"	1.27"	1.05"	60	1.1"	1.61"	1.59"	60	1.1"	1.61"
		1 1/2"										
D	M50	1 1/2"	1.37"	1.74"	1.48"	80	1.42"	2.07"	1.97"	80	1.42"	2.07"
E	M63	2"	1.76"	2.2"	1.93"	100	1.81"	2.57"	2.55"	100	1.81"	2.57"
		2 1/2"										
F	M75	2 1/2"	2.29"	2.68"	2.35"	120	2.24"	3.07"	2.99"	120	2.24"	3.07"
		3"										





### Gland Type 753 specifications

SIZE REF.	THREAD SIZES Parallel Threads are medium fit or better		CABLE ACCEPTANCE DETAILS						CABLE ACCEPTANCE DETAILS			
			INNER SHEATH		CORES		OUTER SHEATH		INNER SHEATH	MAX. NO. OF CORES	OUTER SHEATH	
	MAX OVER CORES	MAX. NO. OF CORES			MIN	MAX						
			MIN	MAX			MIN	MAX	MAX	MIN	MAX	
Os	M16	1/2"	0.14"	0.32"	0.31"	12	0.22"	0.47"	0.39"	6	0.22"	0.47"
	M20											
O	M16	1/2"	0.26"	0.46"	0.35"	12	0.37"	0.63"	0.39"	6	0.37"	0.63"
	M20											
A	M20	1/2"	0.33"	0.55"	0.43"	15	0.49"	0.81"	0.49"	10	0.49"	0.81"
		3/4"										
B	M25	3/4"	0.44"	0.78"	0.63"	30	0.67"	1.02"	0.72"	21	0.67"	1.02"
		1"										
C	M32	1"	0.69"	1.03"	0.86"	42	0.87"	1.3"	0.97"	42	0.87"	1.3"
		1 1/4"										
C2	M40	1 1/4"	0.91"	1.27"	1.05"	60	1.1"	1.61"	1.17"	60	1.1"	1.61"
		1 1/2"										
D	M50	1 1/2"	1.14"	1.74"	1.48"	80	1.42"	2.07"	1.64"	80	1.42"	2.07"
		2"										
E	M63	2"	1.57"	2.2"	1.93"	100	1.81"	2.57"	2.11"	100	1.81"	2.57"
		2 1/2"										
F	M75	2 1/2"	1.99"	2.68"	2.35"	120	2.24"	3.07"	2.57"	120	2.24"	3.07"
		3"							2.61"			

### Condition of manufacture

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

Cable glands listed by this certificate have been subjected to overpressure test up to 62 bar/900 Psi.