




Type Examination Certificate **CML 19ATEX4507X Issue 1**

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Ranges of Barrier and Diaphragm Seal Hybrid Cable Glands – Types ICG 653/UNIV, 710/711/753 & 501/453/UNIV Cable Glands**
- 3 Manufacturer **Hawke International (A Division of Hubbell Limited) (A member of the Hubbell group of companies)**
- 4 Address **Oxford Street West,
Ashton-under-Lyne
OL7 0NA,
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, 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 of Directive 2014/34/EU.
The examination and test results are recorded in the confidential reports listed in Section 12.
- 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 Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Annex VIII 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 IEC 60079-0:2018 EN IEC 60079-15:2019
- 10 The equipment shall be marked with the following:
 II 3 G
Ex nR IIC Gc
Ta = -60°C to +80°C



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11 Description

The product description is amended 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.

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
<ul style="list-style-type: none">• IP washer• Entry nut• *Deluge seal• *Silicone pot• *Silicone resin barrier• *Spigot• *Wire VBL clip• Clamping ring• Middle nut• Back nut• Back nut clamp• Back nut seal	<ul style="list-style-type: none">• IP washer• Entry nut• *Deluge seal• *Diaphragm seal• *Spigot• Clamping ring• Middle nut• Back nut• Back nut clamp• Back nut seal	<ul style="list-style-type: none">• IP washer• Entry nut• Compound pot• Deluge seal• Compound barrier• Front diablo support• Diablo• Rear diablo support• Middle nut• Back nut• Back nut clamp• Back nut seal	<ul style="list-style-type: none">• IP washer• Entry nut• Compound pot• Deluge seal• Compound barrier• Spigot• Clamping ring• Middle nut• Back nut• Back nut clamp• Back nut seal	<ul style="list-style-type: none">• IP washer• Entry nut• Compound pot• Deluge seal• Compound barrier• Spigot• Middle nut• Back nut• Back nut clamp• 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).

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.



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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 (mm)		MAX OVER CORES DIA (mm)	MAX QTY OF CORES	MAX QTY OF FIBRE	INNER SHEATH (mm)		OUTER SHEATH (mm)	
			STD	LEAD				MIN	MAX	MIN	MAX
Os	M16	1/2"	8.1	8.0	8.0	12	48	3.5	8.1	5.5	12.0
	M20										
O	M16	1/2"	11.7	10.2	8.8	12	48	6.5	11.4	9.5	16.0
	M20										
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	1 1/2"	44.2	41.9	37.7	80	/	28.9	44.4	36.0	52.6
		2"									
E	M63	2"	56.0	52.9	49.0	100	/	39.9	56.3	46.0	65.3
		2 1/2"									
F	M75	2 1/2"	68.0	64.9	59.8	120	/	50.5	68.2	57.0	78.0
		3"									



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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 (mm)		MAX OVER CORES DIA (mm)	MAX QTY OF CORES	MAX QTY OF FIBRE	OUTER SHEATH (mm)		INNER SHEATH (mm)		OUTER SHEATH (mm)	
	Metric	NPT	STD	LEAD				MIN	MAX	MIN	MAX		
					MIN	MAX							
A / Os	M16	1/2"	14.0	12.5	10.8	15	72	MIN	MAX	8.4	14.3	5.5	12.0
	M20	3/4"						5.5	12.0				
A / O	M16	1/2"	14.0	12.5	10.8	15	72			8.4	14.3	9.5	16.0
	M20	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	1 1/2"	44.2	41.9	37.7	80				28.9	42.3	28.0	41.0
		2"						28.0	41.0				
E / D	M63	2"	56.0	52.9	49.0	100				39.9	54.3	36.0	56.6
		2 1/2"						36.0	56.6				
F / E	M75	2 1/2"	68.0	64.9	59.8	120				50.5	65.3	46.0	65.3
		3"						46.0	65.3				



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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 (")	
	MAX OVER CORES (")	MAX. NO. OF CORES			MIN	MAX						
	Metric	NPT	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			



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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
		2"										
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"										



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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										
	Metric	NPT	MIN	MAX	MIN	MAX	MIN	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	1.4"	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

Variation 1

This variation introduced the following change:

- i. Introduction of undersize compound pot for gland size Os, O, D, E and F.
- ii. Introduction of thread size M16 for size Os and O, except from gland type 711.
- iii. Adding NPT thread size: 1/2", 2", 2 1/2" for gland size D, E and F respectively.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	11 Feb 2020	R12916A/00	Issue of Prime Certificate
1	16 Mar 2020	R13124A/00	introduction of variation 1

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



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13 Conditions of Manufacture

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

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

14 Specific Conditions of Use (Special Conditions)

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

- i. 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.
- ii. 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.
- iii. 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.
- iv. Glands for use with braided cables are only suitable for fixed installations, the cable for which must be effectively clamped to prevent pulling and twisting.

Certificate Annex

Certificate Number CML 19ATEX4507X
Equipment Ranges of Barrier and Diaphragm Seal Hybrid Cable Glands – Types ICG 653/UNIV 710/711/753 and 501/453/UNIV
Manufacturer Hawke International (A Division of Hubbell Limited) (A member of the Hubbell group of companies)



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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
Omni Gland X	1 to 2	B	11 Feb 2020	GA of type ICG/653/UNIV 501/453/UNIV
ICG-653-UNIV-X	1 to 2	C	11 Feb 2020	GA of type ICG/653/UNIV
501 453 UNIV X	1 to 2	B	11 Feb 2020	GA of type 501/453/UNIV
710-X	1 of 1	B	11 Feb 2020	GA for 710-X Gland
711-X	1 of 1	B	11 Feb 2020	GA for 711-X Cable Gland
753-X	1 of 1	B	11 Feb 2020	GA of type 753-X

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Drawing No	Sheets	Rev	Approved date	Title
Omni Gland X	1 to 2	C	16 Mar 2020	GA of type ICG/653/UNIV 501/453/UNIV
ICG-653-UNIV-X	1 to 2	D	16 Mar 2020	GA of type ICG/653/UNIV
710-X	1 of 1	C	16 Mar 2020	GA for 710-X Gland
711-X	1 of 1	C	16 Mar 2020	GA for 711-X Cable Gland
753-X	1 of 1	C	16 Mar 2020	GA of type 753-X