Hawke International
Supplying Safety Critical Products
for over 50 Years
EPIN AUTOMATION

Cable Glands for Worldwide Applications

EPIN AUTOMATION

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HAWKE International
1955 2005

A Quality Company

A QUALITY COMPANY ALWAYS DEMANDS THE BEST

For those who demand quality, reliability and above all, safety, Hawke products are the obvious choice.

Smarter Products

Hawke International is a division of Hubbell Ltd which is part of the Hubbell Incorporated Group of Companies. Hawke is a well established leading manufacturer of electrical equipment for Hazardous (Classified) locations and hostile environments, with an innovative range of cable connection and termination products.

Sustained safety and reliability under extreme conditions are Hawke's primary goals. The company also promise ease of installation and low lifetime cost of ownership - due to superior design, long life materials and precision manufacturing.

Worldwide

Located in Manchester, UK, Hawke International has subsidiary companies in Houston, USA and Singapore, along with direct representation in Brazil, the Middle East and Canada. Hawke International is supported worldwide by Hubbell Incorporated as well as by a network of agents and distributors.

Product Development

A commitment to the development of innovative features which improve the safety, versatility, reliability and ease of use of our products.

First Choice

Used on Offshore and Onshore oil and gas exploration and production facilities. Hawke's products are the 'First Choice' for the world's major oil and gas companies.

A Quality Company

Hawke International's products are designed and manufactured under a quality system not only complying with ISO 9001, but also with the latest international standards. Rigorous and regular in-house testing ensures that every product manufactured meets the highest quality standards.

AUS KAZAKH PERMIT

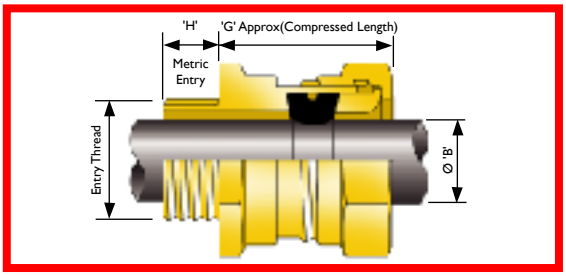
Hawke International - "Leading the way in the design of smarter products"





ATEX Flameproof and Increased Safety

501/421



Application

The 501/421 cable gland provides a seal on the outer cable sheath and is intended for use on non-armoured elastomer and plastic insulated cables. The cable gland is dual certified EExd and EExe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.

CABLE GLAND SELECTION TABLE

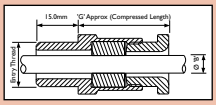
Size Ref.	Entry Thread Size		Thread Length 'H'	Cable Acceptance Details				'G'	Hexagon Dimensions	
				Outer Sheath 'B'						
				Standard Seal		Alternative Seal (S)				
	Metric	NPT* Standard or Option		Min.	Max.	Min.	Max.		Across Flats	Across Corners
2K	M16	-	15	3.0	8.0	-	-	27.0	19.0	21.2
Os	M20[2]	½"	15	3.0	8.0	-	-	32.8	24.0	27.7
O	M20[2]	½"	15	7.5	11.9	-	-	32.8	24.0	27.7
A	M20	¾" or ½"	15	11.0	14.3	8.5	13.4	32.8	30.0	34.6
B	M25	1" or ¾"	15	13.0	20.2	9.5	15.4	33.8	36.0	41.6
C	M32	1¼" or 1"	15	19.0	26.5	15.5	21.2	35.2	46.0	53.1
C2	M40	1½" or 1¼"	15	25.0	32.5	22.0	28.0	36.5	55.0	63.5
D	M50	2" or 1½"	15	31.5	44.4/42.3[1]	27.5	34.8	47.9	65.0	75.1
E	M63	2½" or 2"	15	42.5	56.3/54.3[1]	39.0	46.5	46.2	80.0	92.4
F	M75	3" or 2½"	15	54.5	68.2/65.3[1]	48.5	58.3	48.0	95.0	109.6
G	M80	3½"	20	67.0	73.0	-	-	41.0	106.4	123.0
H	M90	3½"	20	67.0	77.6	-	-	41.0	115.0	132.8
J	M100	4"	20	75.0	91.6	-	-	41.0	127.0	146.7

All dimensions in millimetres (except * where dimensions are in inches). 2K - F size metric entry threads are 1.5mm pitch as standard.
For G size glands and above, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[1] Smaller value is applicable when selecting reduced NPT entry option.
[2] Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm.
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.

Features

- When used in increased safety applications, this cable gland may be used with braided cable where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or aluminium.
- Brass NPT entries are nickel plated as standard.



Size 2K Cable Gland Design

Technical Data

- Flameproof EExd and Increased Safety EExe. Ⓔx II 2 GD
- BASEEFA Certificate No. BAS 01 ATEX 2070X for Os - F. BASEEFA Certificate No. BAS 01 ATEX 2294X for G - J.☐
- Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22. Suitable for use in Gas Groups IIA, IIB and IIC.
- Construction and test standards EN 50014, EN 50018, EN 50019 and EN 50281-1-1. IEC 60079-0, IEC 60079-1 and IEC 60079-7.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN 60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -60°C to +100°C as standard.
- Assembly instruction data sheet No. A.I. 307.
- Alternative Certification Options Available.

Exd IIC/Exe II. CEPEL BR-Exd IIC/Exe II. GOST R-Exd IICU/Exe IIU. Approved for use in Kazakhstan.
AUS-Exd IIC/Exe II.

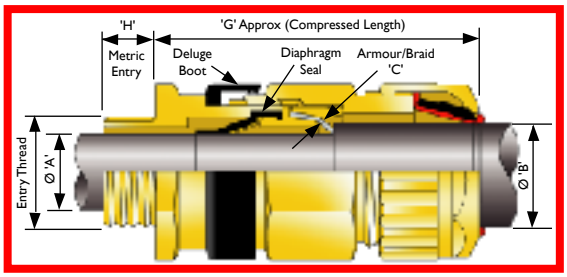
501/453/Universal

Flameproof and Increased Safety

ATEX

Application

The 501/453/Universal cable gland provides a flameproof seal on the inner cable sheath and an IP seal on the outer sheath. It utilises reversible armour clamp (RAC) technology and can therefore accommodate all types of armoured or braided cables (W, X and Z).
The cable gland is particularly suitable for use on 'soft' inner cable sheaths that exhibit "Cold Flow" characteristics as the inner diaphragm seal will not damage the cable bedding.
The cable gland is dual certified EExd and EExe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.



CABLE GLAND SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H'	Cable Acceptance Details								'G'	Hexagon Dimensions	
				Inner Sheath 'A'		Outer Sheath 'B'		Armour/Braid 'C'		Alternative Reversible Armour Clamping Rings (RAC) Steel Wire Armour/Braid/Tape				
	Metric	NPT* Standard or Option		Min.	Max.	Min.	Max.	Orientation 1	Orientation 2	Orientation 1	Orientation 2		Across Flats	Across Corners
Os	M20[2]	½"	15	3.0	8.1	5.5	12.0	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	64.4	24.0	27.7
O	M20[2]	½"	15	7.5	11.9	9.5	16.0	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	64.4	24.0	27.7
A	M20	¾" or ½"	15	9.4	14.3	12.5	20.5	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	65.4	30.0	34.6
B	M25	1" or ¾"	15	12.1	20.2	16.9	26.0	1.25/1.6	0/0.7	0.9 - 1.25	0.5 - 0.9	71.0	36.0	41.6
C	M32	1¼" or 1"	15	17.6	26.5	22.0	33.0	1.6/2.0	0/0.7	1.2 - 1.6	0.6 - 1.2	76.0	46.0	53.1
C2	M40	1½" or 1¼"	15	23.1	32.5	28.0	41.0	1.6/2.0	0/0.7	1.2 - 1.6	0.6 - 1.2	78.1	55.0	63.5
D	M50	2" or 1½"	15	28.9	44.4/42.3[1]	36.0	52.6	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	93.1	65.0	75.1
E	M63	2½" or 2"	15	39.9	56.3/54.3[1]	46.0	65.3	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	99.0	80.0	92.4
F	M75	3" or 2½"	15	50.5	68.2/65.3[1]	57.0	78.0	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	101.9	95.0	109.6
G[4]	M80	3½"	20	67.0	73.0	75.0	89.5	#	#	-	-	90.6	106.4	123.0
H[4]	M90	3½"	20	67.0	77.6	75.0	89.5	#	#	-	-	90.6	115.0	132.8
J[4]	M100	4"	20	75.0	91.6	88.0	104.5	#	#	-	-	90.6	127.0	146.7

All dimensions in millimetres (except * where dimensions are in inches). Os - F size metric entry threads are 1.5mm pitch as standard.
For G size glands and above, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[1] Smaller value is applicable when selecting reduced NPT entry option.
[2] Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm.
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.
[4] Larger cable glands available in 501/453 design with a compression type inner seal.
Dedicated armour clamping rings are fitted. Please specify armour type and size when ordering.

Features

- **Reversible Armour Clamp** - One clamping device accommodates all types of armour or braid.
- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable armour or braid and associated equipment.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- **Inner Diaphragm Seal** - 50% faster to install than conventional seals and will not damage cable bedding.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

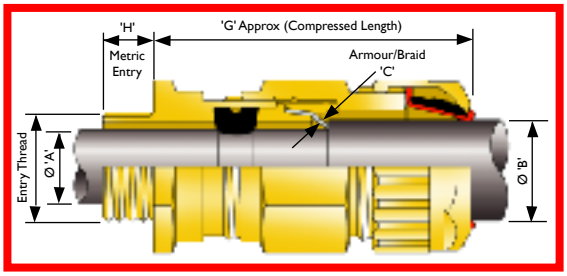
- Flameproof EExd and Increased Safety EExe. II 2 GD
- BASEEFA Certificate No. BAS 01 ATEX 2078X for Os - F. BASEEFA Certificate No. BAS 01 ATEX 2296X for G - J.☐
- Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22. Suitable for use in Gas Groups IIA, IIB and IIC.
- Construction and test standards EN 50014, EN 50018, EN 50019 and EN 50281-1-1. IEC 60079-0, IEC 60079-1 and IEC 60079-7.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN 60529 and NEMA 4X.
- DTS01 deluge protection certified by ITS.
- Operating temperature range -60°C to +80°C as standard.
- Assembly instruction data sheet No. A.I. 300 for sizes Os to F. Assembly instruction data sheet No. A.I. 329 for sizes G to J.
- Alternative Certification Options Available.

Exd IIC/Exe II. CEPEL BR-Exd IIC/Exe II. GOST R-Exd IICU/Exe IIU. Approved for use in Kazakhstan.
AUS-Exd IIC/Exe II.

ATEX Flameproof and Increased Safety

501/453/RAC

Application



The 501/453/RAC cable gland provides a flameproof seal on the inner cable sheath and an IP seal on the outer sheath. It utilises reversible armour clamp (RAC) technology and can therefore accommodate all types of armoured or braided cables (W, X and Z).
The cable gland is dual certified EExd and EExe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.

CABLE GLAND SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H'	Cable Acceptance Details										'G'	Hexagon Dimensions	
				Inner Sheath 'A'				Outer Sheath 'B'		Armour/Braid 'C'		Alternative Reversible Armour Clamping Rings (RAC) Armour/Braid 'C'				
				Standard Seal		Alternative Seal (S)										
	Metric	NPT* Standard or Option		Min.	Max.	Min.	Max.	Min.	Max.	Orientation 1	Orientation 2	Orientation 1	Orientation 2		Across Flats	Across Corners
Os	M20[2]	½"	15	3.0	8.0	-	-	5.5	12.0	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	65.1	24.0	27.7
O	M20[2]	½"	15	7.5	11.9	-	-	9.5	16.0	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	65.1	24.0	27.7
A	M20	¾"or½"	15	11.0	14.3	8.5	13.4	12.5	20.5	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	66.1	30.0	34.6
B	M25	1"or¾"	15	13.0	20.2	9.5	15.4	16.9	26.0	1.25/1.6	0/0.7	0.9 - 1.25	0.5 - 0.9	71.4	36.0	41.6
C	M32	1¼"or1"	15	19.0	26.5	15.5	21.2	22.0	33.0	1.6/2.0	0/0.7	1.2 - 1.6	0.6 - 1.2	75.2	46.0	53.1
C2	M40	1½"or1¼"	15	25.0	32.5	22.0	28.0	28.0	41.0	1.6/2.0	0/0.7	1.2 - 1.6	0.6 - 1.2	77.1	55.0	63.5
D	M50	2"or1½"	15	31.5	44.4/42.3[1]	27.5	34.8	36.0	52.6	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	90.3	65.0	75.1
E	M63	2½"or2"	15	42.5	56.3/54.3[1]	39.0	46.5	46.0	65.3	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	96.7	80.0	92.4
F	M75	3"or2½"	15	54.5	68.2/65.3[1]	48.5	58.3	57.0	78.0	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	96.0	95.0	109.6
G[4]	M80	3½"	20	67.0	73.0	-	-	75.0	89.5	#	#	-	-	95.6	106.4	123.0
H[4]	M90	3½"	20	67.0	77.6	-	-	75.0	89.5	#	#	-	-	95.6	115.0	132.8
J[4]	M100	4"	20	75.0	91.6	-	-	88.0	104.5	#	#	-	-	95.6	127.0	146.7

All dimensions in millimetres (except * where dimensions are in inches). Os - F size metric entry threads are 1.5mm pitch as standard.
For G size glands and above, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[1] Smaller value is applicable when selecting reduced NPT entry option.
[2] Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm.
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.
[4] Larger cable glands available in 501/453 design.
[5] This cable gland type is also available for use with lead sheath cables - 501/453/RAC/L. Contact Hawke sales for more information.
[6] Deluge protection option available.
Dedicated armour clamping rings are fitted. Please specify armour type and size when ordering.

Features

- **Reversible Armour Clamp** - One clamping device accommodates all types of armour or braid.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

- Flameproof EExd and Increased Safety EExe. Ex II 2 GD
- BASEEFA Certificate No. BAS 01 ATEX 2072X for Os - F. BASEEFA Certificate No. BAS 01 ATEX 2296X for G - J.☐
- Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22. Suitable for use in Gas Groups IIA, IIB and IIC.
- Construction and test standards EN 50014, EN 50018, EN 50019 and EN 50281-1-1. IEC 60079-0, IEC 60079-1 and IEC 60079-7.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN 60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -60°C to +80°C as standard.
- Assembly instruction data sheet No. A.I. 302 for sizes Os to F. Assembly instruction data sheet No. A.I. 329 for sizes G to J.
- Alternative Certification Options Available.

Exd IIC/Exe II. CEPEL BR-Exd IIC/Exe II. GOST R-Exd IICU/Exe IIU. Approved for use in Kazakhstan.
AUS-Exd IIC/Exe II.

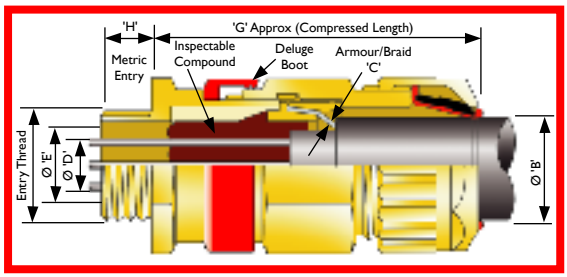
ICG 653/Universal

Flameproof and Increased Safety

ATEX

Application

The ICG 653/Universal cable gland provides a flameproof barrier seal on the individual insulated cable cores and prevents entry of the products of an explosion into the cable's surrounding environment. It also provides an IP seal on the cable outer sheath. The cable gland is suitable for cables that are not effectively filled and for cables with a 'soft' inner sheath that exhibit "Cold Flow" characteristics. The cable gland is dual certified EExd and EExe and is suitable for installations in Zone 1 (21) and Zone 2 (22) hazardous areas, where the enclosure is greater than 2 litres in volume and contains an ignition source and requires IIC apparatus.



CABLE GLAND SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H'	Cable Acceptance Details								'G'	Hexagon Dimensions	
				Inner Sheath/Cores			Outer Sheath 'B'		Armour/Braid 'C'		Alternative Reversible Armour Clamping Rings (RAC) Armour/Braid 'C'			
	Metric	NPT* Standard or Option		'D' Max. Over Cores	'E' Max. Inner Sheath	Max. No. Of Cores	Min.	Max.	Orientation 1	Orientation 2	Orientation 1	Orientation 2		Across Flats	Across Corners
Os	M20	½"	15	8.9	10.0	6	5.5	12.0	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	72.8	24.0	27.7
O	M20	½"	15	8.9	10.0	6	9.5	16.0	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	72.8	24.0	27.7
A	M20	¾"or½"	15	11.0	12.5	10	12.5	20.5	0.9/1.25	0/0.7	0.8 - 1.0	0.4 - 0.8	73.8	30.0	34.6
B	M25	1"or¾"	15	16.2	18.4	21	16.9	26.0	1.25/1.6	0/0.7	0.9 - 1.25	0.5 - 0.9	78.1	36.0	41.6
C	M32	1¼"or1"	15	21.9	24.7	42	22.0	33.0	1.6/2.0	0/0.7	1.2 - 1.6	0.6 - 1.2	83.0	46.0	53.1
C2	M40	1½"or1¼"	15	26.3	29.7	60	28.0	41.0	1.6/2.0	0/0.7	1.2 - 1.6	0.6 - 1.2	84.1	55.0	63.5
D	M50	2"or1½"	15	37.1	41.7	80	36.0	52.6	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	91.3	65.0	75.1
E	M63	2½"or2"	15	47.8	53.3	100	46.0	65.3	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	101.8	80.0	92.4
F	M75	3"or2½"	15	59.0	66.2/65.3[1]	120	57.0	78.0	1.8/2.5	0/1.0	1.45 - 1.8	1.0 - 1.45	101.2	95.0	109.6

Metric entry threads are 1.5mm pitch as standard.
All dimensions in millimetres (except * where dimensions are in inches).

[1] Smaller value is applicable when selecting reduced NPT entry option.
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.
[5] This cable gland type is also available for use with lead sheath cables - ICG 653/Universal/L. Contact Hawke sales for more information.

Features

- **Inspectable Compound Chamber** - Can be separated from the cured compound to allow barrier seal inspection and possible repair.
- **Reversible Armour Clamp** - One clamping device accommodates all types of armour or braid.
- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable armour or braid and associated equipment. ☐ ☐ The red coloured deluge seal indicates a barrier (explosion proof connector) type cable gland.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

- Flameproof EExd and Increased Safety EExe. II 2 GD
- BASEEFA Certificate No. BAS 01 ATEX 2080X. ☐
- Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22. Suitable for use in Gas Groups IIA, IIB and IIC.
- Construction and test standards EN 50014, EN 50018, EN 50019 and EN 50281-1-1. IEC 60079-0, IEC 60079-1 and IEC 60079-7.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN 60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -60°C to +80°C as standard.
- Assembly instruction data sheet No. A.I. 301.
- Two part sealing compound and assembly instructions are supplied with the cable gland.
- Alternative Certification Options Available.

Exd IIC/Exe II. CEPEL BR-Exd IIC/Exe II. GOST R-Exd IICU/Exe IIU. Approved for use in Kazakhstan.

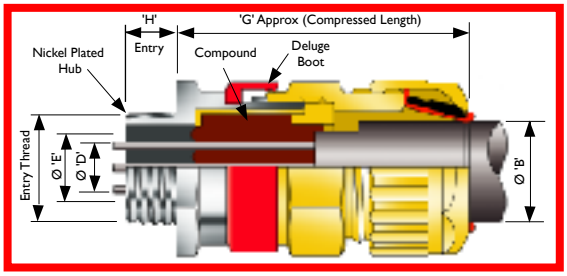
AUS-Exd IIC/Exe II.

HAWKE International 1955 2005
HWK35 Feb '05

Explosion Proof

710

Application



The 710 Cable Connector is intended for use with non-armoured cable, as permitted by the NEC.
It provides an explosion proof seal around the cable conductors and an IP seal on the cables outer jacket.
The connector is UL Listed for use in Class 1 Division 2 and Class 1 Zone 2 applications.

CONNECTOR SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H' *	Cable Acceptance Details					'G'	Hexagon Dimensions	
				Inner Sheath/Cores			Outer Jacket 'B'				
	NPT Std./ Option	Metric *		'D' Max. Over Cores	'E' Max. Inner Sheath	Max. No. Of Cores	Min.	Max.		Across Flats	Across Corners
Os	½"	M20[2]	15	0.35"	0.39"	6	0.22"	0.47"	2.81"	0.94"	1.09"
O	½"	M20[2]	15	0.35"	0.39"	6	0.37"	0.63"	2.81"	0.94"	1.09"
A	½" or ¾"	M20	15	0.43"	0.64"	10	0.49"	0.81"	2.84"	1.18"	1.36"
B	¾" or 1"	M25	15	0.64"	0.93"	21	0.66"	1.02"	2.95"	1.42"	1.64"
C	1" or 1¼"	M32	15	0.86"	1.23"	42	0.87"	1.30"	3.11"	1.81"	2.09"
C2	1¼" or 1½"	M40	15	1.04"	1.59"	60	1.10"	1.61"	3.26"	2.17"	2.50"
D	2" or 1½"	M50	15	1.46"	1.96"	80	1.42"	2.07"	3.36"	2.56"	2.96"
E	2½" or 2"	M63	15	1.88"	2.55"	100	1.81"	2.57"	3.56"	3.15"	3.64"
F	3" or 2½"	M75	15	2.32"	2.98"	120	2.24"	3.07"	3.76"	3.74"	4.31"
H	3½"	M90	20	2.79"	3.12"	-	3.07"	3.52"	3.54"	4.18"	4.84"

All dimensions in inches (except * where dimensions are in millimetres). Os - F size metric entry threads are 1.5mm pitch as standard.
For H size glands, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[2] Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner jacket diameter is 0.43".
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.

Features

- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable and associated equipment.
  ☐ ☐ The red coloured deluge seal indicates a barrier (explosion proof connector) type cable gland.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or copper free aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

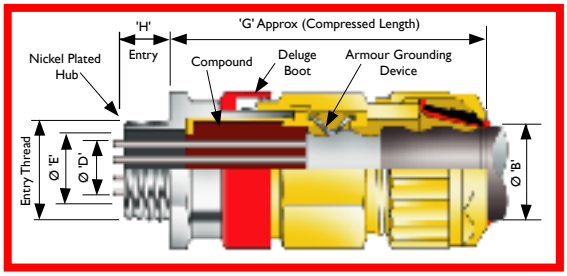
- UL Listed for use in Class1, Division 2, Gas Groups A, B, C and D.
- UL Listed for use in Class1, Zone 2, Gas Groups IIA, IIB and IIC.
- UL Listed AExd IIC and AExe II Class 1, Zone 2.
- Construction and test standards UL Listed hazardous locations in USA and Canada. E84940.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -50°C to +60°C as standard.
- Assembly instruction data sheet No. A.I. 316 for sizes Os to F. Assembly instruction data sheet No.A.I. 337 for size H.
- Two part sealing compound and assembly instructions are supplied with the cable connector.

711

Explosion Proof

Application

The 711 Cable Connector is intended for use with continuous corrugated aluminium, Metal Clad (MCHL) type cable. The connector provides an explosion proof seal around the cable conductors, a 360° grounding and an IP seal on the cables outer jacket.
The connector is UL Listed for use in Class 1 Division 1 and Class 1 Zone 1 applications.



CONNECTOR SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H' *	Cable Acceptance Details						'G'	Hexagon Dimensions	
				Inner Sheath/Cores				Outer Jacket 'B'				
	NPT Std./ Option	Metric *		'D' Max. Over Cores	Armour Sheath 'E' Min.	Armour Sheath 'E' Max.	Max. No. Of Cores	Min.	Max.		Across Flats	Across Corners
A	½ or /¾"	M20	15	0.43"	0.41"	0.64"	10	0.49"	0.81"	2.74"	1.18"	1.36"
B	¾" or 1"	M25	15	0.64"	0.49"	0.93"	21	0.66"	1.02"	2.95"	1.42"	1.64"
C	1" or 1¼"	M32	15	0.86"	0.85"	1.23"	42	0.87"	1.30"	3.04"	1.81"	2.09"
C2	1¼" or 1½"	M40	15	1.04"	1.17"	1.59"	60	1.10"	1.61"	3.09"	2.17"	2.50"
D	2" or 1½"	M50	15	1.46"	1.37"	1.96"	80	1.42"	2.07"	3.37"	2.56"	2.96"
E	2½" or 2"	M63	15	1.88"	1.76"	2.55"	100	1.81"	2.57"	3.65"	3.15"	3.64"
F	3" or 2½"	M75	15	2.32"	2.29"	2.98"	120	2.24"	3.07"	3.73"	3.74"	4.31"
H	3½"	M90	20	2.79"	2.93"	3.47"	120	3.07"	3.52"	4.33"	4.18"	4.84"

All dimensions in inches (except * where dimensions are in millimetres). A - F size metric entry threads are 1.5mm pitch as standard. For H size glands, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.

Features

- **Armour Grounding Device** - Fully inspectable 360° cable armour grounding, which remains in contact with the metal jacket when the connector is disassembled.
- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable armour and associated equipment. The red coloured deluge seal indicates a barrier (explosion proof connector) type cable gland.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or copper free aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

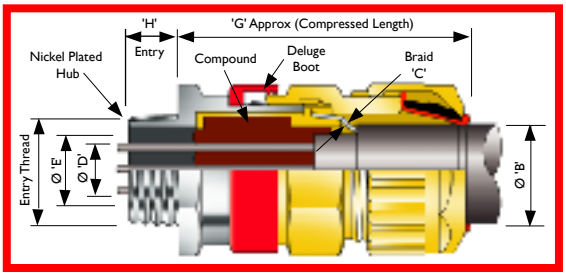
- UL Listed for use in Class1, Division 1, Gas Groups A, B, C and D.
- UL Listed for use in Class1, Zone 1, Gas Groups IIA, IIB and IIC.
- UL Listed AExd IIC and AExe II Class 1, Zone 1.
- Construction and test standards UL Listed hazardous locations in USA and Canada. E84940.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -50°C to +60°C as standard.
- Assembly instruction data sheet No. A.I. 317 for sizes A to F. Assembly instruction data sheet No. A.I. 338 for size H.
- Two part sealing compound and assembly instructions are supplied with the cable connector.

For Class 1, Division 2 MC cable applications, the 713 cable connector is available. Cable connector features and sizes are the same as the 711.

Explosion Proof

753

Application



The 753 Cable Connector is intended for use with braid armoured marine shipboard, jacketed or non-jacketed cable.
It provides an explosion proof seal around the cable conductors and IP seal on the cables outer jacket. Mechanical cable retention and grounding are provided by the braid clamping device.
The connector is UL Listed for use in Class I Division I and Class I Zone I applications.

CONNECTOR SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H' *	Cable Acceptance Details						'G'	Hexagon Dimensions	
				Inner Sheath/Cores			Outer Jacket 'B'		'C'			
	NPT Std./ Option	Metric *		'D' Max. Over Cores	'E' Max. Inner Sheath	Max. No. Of Cores	Min.	Max.	Braid		Across Flats	Across Corners
Os	½"	M20[2]	15	0.35"	0.46"	6	0.22"	0.47"	0.008"/0.013"	2.80"	0.94"	1.09"
O	½"	M20[2]	15	0.35"	0.46"	6	0.37"	0.63"	0.008"/0.013"	2.80"	0.94"	1.09"
A	½" or ¾"	M20	15	0.43"	0.49"	10	0.49"	0.81"	0.008"/0.013"	2.83"	1.18"	1.36"
B	¾" or 1"	M25	15	0.64"	0.72"	21	0.66"	1.02"	0.008"/0.013"	2.94"	1.42"	1.64"
C	1" or 1¼"	M32	15	0.86"	0.97"	42	0.87"	1.30"	0.008"/0.013"	3.10"	1.81"	2.09"
C2	1¼" or 1½"	M40	15	1.04"	1.16"	60	1.10"	1.61"	0.008"/0.013"	3.26"	2.17"	2.50"
D	2" or 1½"	M50	15	1.46"	1.64"	80	1.42"	2.07"	0.008"/0.013"	3.35"	2.56"	2.96"
E	2½" or 2"	M63	15	1.88"	2.11"	100	1.81"	2.57"	0.008"/0.013"	3.56"	3.15"	3.64"
F	3" or 2½"	M75	15	2.32"	2.61"/2.57"[1]	120	2.24"	3.07"	0.008"/0.013"	3.76"	3.74"	4.31"
H	3½"	M90	20	2.79"	3.05"	-	3.07"	3.52"	0.008"/0.013"	3.54"	4.18"	4.84"

All dimensions in inches (except * where dimensions are in millimetres). Os - F size metric entry threads are 1.5mm pitch as standard.
For H size glands, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[1] Smaller value is applicable when selecting reduced NPT entry option.
[2] Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner jacket diameter is 0.43".
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.

Features

- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable armour or braid and associated equipment. The red coloured deluge seal indicates a barrier (explosion proof connector) type cable gland.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or copper free aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

- UL Listed for use in Class1, Division 1, Gas Groups A, B, C and D.
- UL Listed for use in Class1, Zones 1 & 2, Gas Groups IIA, IIB and IIC.
- UL Listed AExd IIC and AExe II Class 1, Zone 1.
- Construction and test standards UL Listed hazardous locations in USA and Canada. E84941.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -50°C to +60°C as standard.
- Assembly instruction data sheet No. A.I. 318 for sizes Os to F. Assembly instruction data sheet No. A.I. 339 for size H.
- Two part sealing compound and assembly instructions are supplied with the cable connector.

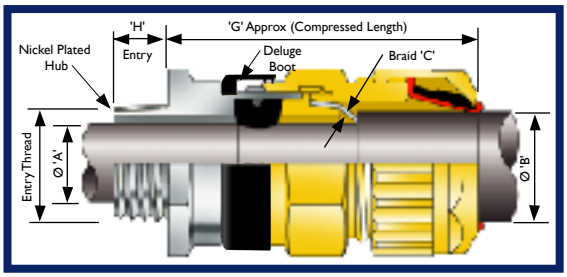
For Class 1, Division 2 armoured jacketed cable applications, the 755 cable gland/connector is available.
Details and sizes are the same as the 753.

153/X

General Purpose

Application

The 153/X Cable Connector provides a seal on the inner cable jacket and a seal on the outer jacket. Mechanical cable retention and grounding is provided by the braid clamping device. It also offers an IP seal on the cables outer jacket. The connector is UL Listed for use in wet locations.



CONNECTOR SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H' *	Cable Acceptance Details								Hexagon Dimensions	
				Inner Sheath 'A'				Outer Jacket 'B'		'C'	'G'		
				Standard Seal		Alternative Seal (S)							
	NPT Std./ Option	Metric *		Min.	Max.	Min.	Max.	Min.	Max.	Braid		Across Flats	Across Corners
Os	½"	M20 [2]	15	0.12"	0.31"	-	-	0.22"	0.47"	0.008"/0.013"	3.19"	0.94"	1.09"
O	½"	M20 [2]	15	0.30"	0.46"	-	-	0.37"	0.63"	0.008"/0.013"	3.19"	0.94"	1.09"
A	½" or ¾"	M20	15	0.44"	0.56"	0.34"	0.52"	0.49"	0.81"	0.008"/0.013"	3.27"	1.18"	1.36"
B	¾" or 1"	M25	15	0.52"	0.79"	0.38"	0.60"	0.66"	1.02"	0.008"/0.013"	3.43"	1.42"	1.64"
C	1" or 1¼"	M32	15	0.75"	1.04"	0.61"	0.83"	0.87"	1.30"	0.008"/0.013"	3.62"	1.81"	2.09"
C2	1¼" or 1½"	M40	15	0.99"	1.27"	0.87"	1.10"	1.10"	1.61"	0.008"/0.013"	3.90"	2.17"	2.50"
D	2" or 1½"	M50	15	1.24"	1.74"/1.67" [1]	1.09"	1.37"	1.42"	2.07"	0.008"/0.013"	4.45"	2.56"	2.96"
E	2½" or 2"	M63	15	1.68"	2.21"/2.14" [1]	1.54"	1.83"	1.81"	2.57"	0.008"/0.013"	4.61"	3.15"	3.64"
F	3" or 2½"	M75	15	2.15"	2.68"/2.57" [1]	1.91"	2.29"	2.24"	3.07"	0.008"/0.013"	4.72"	3.74"	4.31"
G	3½"	M80	20	2.63"	2.87"	-	-	3.05"	3.52"	0.008"/0.013"	4.48"	4.19"	4.84"
H	3½"	M90	20	2.63"	3.05"	-	-	3.05"	3.52"	0.008"/0.013"	4.48"	4.52"	5.22"
J	4"	M100	20	2.95"	3.60"	-	-	3.46"	4.11"	0.008"/0.013"	4.48"	5.00"	5.77"

All dimensions in inches (except * where dimensions are in millimetres). Os - F size metric entry threads are 1.5mm pitch as standard. For G size glands and above, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[1] Smaller value is applicable when selecting reduced NPT entry option.
[2] Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 0.43".
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.

Features

- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable armour or braid and associated equipment.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or copper free aluminium.
- Brass NPT entries are nickel plated as standard.

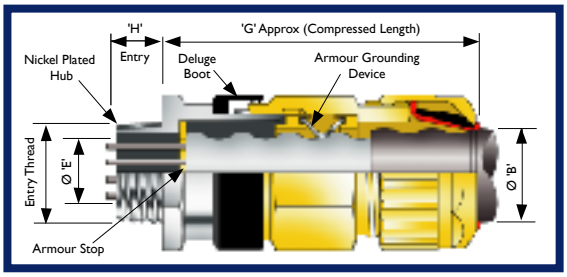
Technical Data

- Construction and test standards UL Listed wet locations. E218332.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -50°C to +60°C as standard.
- Assembly instruction data sheet No. A.I. 341.

General Purpose

701

Application



The 701 Cable Connector is intended for use with continuous corrugated aluminium, interlocked steel Metal Clad (MC) and Teck type cables.
The connector provides a 360° grounding and an IP seal on the cables outer jacket.
The connector is UL Listed for use in wet locations.

CONNECTOR SELECTION TABLE

Size Ref.	Entry Thread Size		Thread Length 'H' *	Cable Acceptance Details				'G'	Hexagon Dimensions	
				Armour Sheath 'E'		Outer Jacket 'B'				
	NPT Std./ Option	Metric *		Min.	Max.	Min.	Max.		Across Flats	Across Corners
A	½" or ¾"	M20	15	0.41"	0.64"	0.49"	0.81"	2.74"	1.18"	1.36"
B	¾" or 1"	M25	15	0.49"	0.93"	0.66"	1.02"	2.95"	1.42"	1.64"
C	1" or 1¼"	M32	15	0.85"	1.23"	0.87"	1.30"	3.04"	1.81"	2.09"
C2	1¼" or 1½"	M40	15	1.17"	1.59"	1.10"	1.61"	3.09"	2.17"	2.50"
D	2" or 1½"	M50	15	1.37"	1.96"	1.42"	2.07"	3.37"	2.56"	2.96"
E	2½" or 2"	M63	15	1.76"	2.55"	1.81"	2.57"	3.65"	3.15"	3.64"
F	3" or 2½"	M75	15	2.29"	2.98"	2.24"	3.07"	3.73"	3.74"	4.31"
H	3½"	M90	20	2.93"	3.47"	3.07"	3.52"	4.33"	4.18"	4.84"

All dimensions in inches (except * where dimensions are in millimetres). A - F size metric entry threads are 1.5mm pitch as standard.
For H size glands, a 2mm pitch is supplied as standard (1.5mm pitch with 15mm length of thread can be supplied) please specifiy when ordering.

[2]Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner jacket diameter is 0.43".
[3] Accessories including locknuts, sealing washers, serrated washers, earth tags, shrouds, adaptors and reducers are also available.

Features

- **Armour Grounding Device** - Fully inspectable 360° cable armour grounding, which remains in contact with the metal jacket when the connector is disassembled.
- **External Deluge Seal** - Visibly inspectable device that prevents moisture ingress into the cable armour and associated equipment.
- **Versatile LSFZH Rear Seal** - Accommodates a wide range of cable sizes and provides highly effective cable grip/ingress protection.
- Manufactured in brass (standard), nickel plated brass, 316 stainless steel or copper free aluminium.
- Brass NPT entries are nickel plated as standard.

Technical Data

- Construction and test standards UL Listed wet locations. E165706.
- IP66, IP67 and IP68 (30 metres for 7 days) ingress protection to IEC 60529, EN60529 and NEMA 4X.
- DTS01 deluge protection, certified by ITS.
- Operating temperature range -50°C to +60°C as standard.
- Assembly instruction data sheet No. A.I. 315 for sizes A to F. Assembly instruction data sheet No. A.I. 342 for size H.

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