

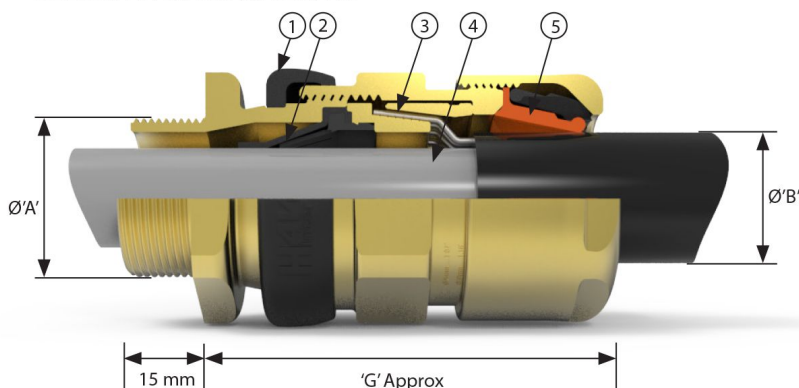


# 501/453 UNIVERSAL

Flameproof, Increased Safety, Dust Protection & Restricted Breathing

Class - Zones

Certified ATEX / IECEx / c CSA us



- ① Inspectable Deluge Seal - Offering IP66, IP67, IP68 & IP69 Ingress Protection
- ② Passive diaphragm seal - Suitable for cables exhibiting 'Cold Flow.' Fully inspectable
- ③ Reversible Armour Clamp - For all types of armour and braid.
- ④ Patented Cable Gland Tightening Guide - Helps prevent damage caused by over tightening
- ⑤ Unique Rear Seal - Offering ultimate sealing over an extremely wide cable acceptance range.

The 501/453 Universal Cable Gland is dual certified Exe/Exd, robust and for use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables. For particular use with cables that exhibit 'Cold Flow' characteristics.  
See technical section for installation rules and regulations

## Cable Gland Selection Table

Size Ref.	Entry Thread Size 'A'		Cable Acceptance Details						'G'	Hexagon Dimensions	
	Metric	NPT* Standard or Option	Inner Sheath		Outer Sheath 'B'		Armour / Braid 'C'			Across Flats	Across Corners
			Min.	Max.	Min.	Max.	Orientation 1	Orientation 2			
Os	M20 <sup>2</sup>	½"	3.5	8.1	5.5	12.0	0.8 / 1.25	0.0 / 0.8	58.4	24.0	26.5
O	M20 <sup>2</sup>	½"	6.5	11.4	9.5	16.0	0.8/1.25	0.0 / 0.8	58.4	24.0	26.5
A	M20	¾" or ½"	8.4	14.3	12.5	20.5	0.8 / 1.25	0.0 / 0.8	59.6	30.0	32.5
B	M25	1" or ¾"	11.1	19.7	16.9	26.0	1.25 / 1.6	0.0 / 0.7	66.4	36.0	39.5
C	M32	1¼" or 1"	17.6	26.5	22.0	33.0	1.6 / 2.0	0.0 / 0.7	71.2	46.0	50.5
C2	M40	1½" or 1¼"	23.1	32.5	28.0	41.0	1.6 / 2.0	0.0 / 0.7	75.2	55.0	60.6
D	M50	2" or 1½"	28.9	44.4 / 42.3 <sup>1</sup>	36.0	52.6	1.8 / 2.5	0.0 / 1.0	98.0	65.0	70.8
E	M63	2½" or 2"	39.9	56.3 / 54.3 <sup>1</sup>	46.0	65.3	1.8 / 2.5	0.0 / 1.0	94.4	80.0	88.0
F	M75	3" or 2½"	50.5	68.2 / 65.3 <sup>1</sup>	57.0	78.0	1.8 / 2.5	0.0 / 1.0	102.0	95.0	104.0
G	M80	3½"	67.0	73.0	75.0	89.5	2.0 / 3.5	0.0 / 1.0	90.6	106.4	115.0
H	M90	3½"	67.0	77.6	75.0	89.5	2.0 / 3.5	0.0 / 1.0	90.6	115.0	130.0
J	M100	4"	75.0	91.6	88.0	104.5	2.5 / 4.0	0.0 / 1.0	90.6	127.0	142.0

Os-F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread only (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering. G size and above are available in the 501/453/ RAC design style. All dimensions in millimetres (except \* where dimensions are in inches).

<sup>1</sup> Smaller value is applicable when selecting reduced NPT entry option.

<sup>2</sup> 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

## Technical Data

### ATEX/IECEx

Type of Protection	Flameproof Exdb IIC Gb, Increased Safety Exeb IIC Gb, Dust Extb IIIC Db Ex II 2 GD
ATEX Classification	CML 19ATEX1168X CML 19.0046X
Area Classification	Suitable for use in Zone 1, Zone 2, Zone 21 and Zone 22
Construction & Test Standards	IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7, IEC/EN 60079-1 and IEC/EN 60079-31
Ingress Protection	IP66, IP67, IP68 (30 metres for 7 days) and IP69 to IEC/EN 60529 and NEMA 4X
Deluge Protection	Deluge Protection to DTS01
Operating Temperature	-60°C to +80°C

### c CSA us

Type of Protection	Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21
c CSA us Classification	Certificate No's: CSA1015065
Area Classification	
Construction & Test Standards	UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

## Ordering Information

Format for ordering is as follows: Alternative Clamping Ring (AR), add suffix AR to ordering information

Cable Gland Type	Size	Thread	Material	(Optional)
501/453/UNIV	C	M32	Brass	AR
501/453/UNIV	C	1¼" NPT	NP Brass	AR

Example Code: 501/453/UNIV C M32 Stainless

Alternative Reversible Armour Clamping Ring Size Selection		
Size Ref	Steel Wire Armour / Braid / Tape	
	Orientation 1	Orientation 2
B	0.9 - 1.25	0.5 - 0.9
C	1.2 - 1.6	0.6 - 1.2
C2	1.2 - 1.6	0.6 - 1.2
D	1.45 - 1.8	1.0 - 1.45
E	1.45 - 1.8	1.0 - 1.45
F	1.45 - 1.8	1.0 - 1.45

# Barrier Gland Upgrade Kit

The Barrier gland upgrade kit comes with everything needed to turn the 501/453/UNIVERSAL into the ICG/653/UNIVERSAL barrier gland. The kit, available in ExPress injectable self-mixing barrier resin and QSP 2-part hand mix putty both offer a barrier cure time from 30 minutes, are both fully inspectable and offer full visibility of the flameproof seal during installation and inspection.

Ordering Information			
Format for ordering is as follows:			
Product type	Resin type	Size*	Material
Conversion pack	Putty	A	Brass
Conversion pack	Liquid	A	Brass

\*To match the size of the 501/453/UNIV you want to convert to a ICG653/UNIV  
\*\* To match the material of the 501/453/UNIV you want to convert to a ICG653/UNIV

# Cable Gland Tightening Guide

Whilst Hawke International goes to great lengths to ensure products are designed to be as simple to install, inspect and maintain as is possible, differing levels of competency, training and understanding can lead to glands being incorrectly installed. With hazardous area products, any poor installation issues can not only lead to expensive equipment failure, but also potential explosion risks and associated risk to life.

To help address issues with the overtightening of cable glands and the resultant damage to cables and seals, Hawke International has developed the patented **INBUILT TIGHTENING GUIDE**.

Without the need for fiddly measuring systems, the guide provides a permanent visual indication of the gland tightness through installation, inspection and maintenance.

## How it works

The gland is permanently marked with various lines/numbers indicating the correct tightening level related to the cable diameter. Following the relevant cable gland Installation Instructions, the back seal should be tightened until a seal is formed on the cable outer sheath and then tightened one further turn.



Follow cable gland installation instructions until final stage – tightening of rear seal



Tighten backnut until a seal is formed onto the cable, then tighten one further turn



The backnut should be level with the marking guide corresponding to its diameter – this can be visually inspected and adjusted as necessary