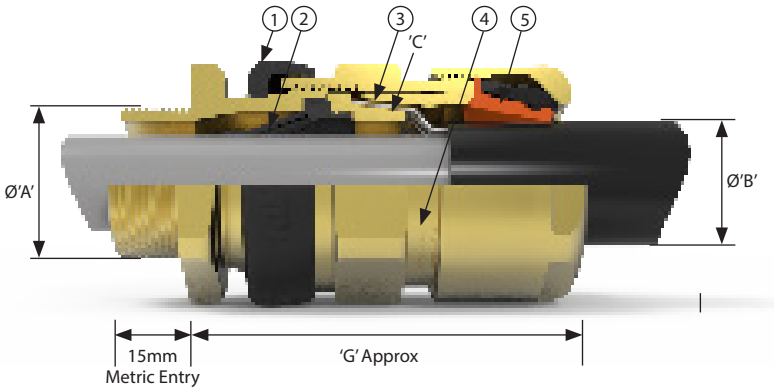
MADE IN BRITAIN

501/453/UNIV

Flameproof, Increased Safety, Dust Protection & Restricted Breathing
Class - Zones
Certified ATEX / IECEx / UKEX / c CSA us

International Approvals



- 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. This cable gland is the first and only cable gland capable of being upgraded to a barrier type solution in the field. see below for more details. See technical section for installation rules and regulations.

Cable Gland Selection Table

Size Ref.	Entry Thread Size 'A'		Cable Acceptance Details						'G'	Hexagon Dimensions	
			Inner Sheath		Outer Sheath 'B'		Armour / Braid 'C'				
	Metric	NPT*	Min.	Max.	Min.	Max.	Orientation 1	Orientation 2		Across Flats	Across Corners
Os	M20[2]	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[2]	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[1]	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[1]	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[1]	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"	77.0	91.6	88.0	104.5	2.5 / 4.0	0.0 / 1.0	90.6	127.0	142.0

All dimensions in millimetres (except * where dimensions are in inches)
Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread
G - J size metric entry threads are 2mm pitch as standard, 20mm length of thread
G - J size are only available in the 501/453/RAC design style.

[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

Technical Data

Material Options	Manufactured in Brass, Nickel Plated Brass or 316L Stainless Steel
Ingress Protection	IP66, IP67 IP68 (30 metres for 7 days, special conditions may apply) and IP69 to IEC/EN 60529 and NEMA 4X
Deluge Protection	to DTS01
Enclosure Protection	IK10 to IEC 62262
Operating Temperature	-60°C to +80°C
Applications	Suitable for use in Zone 1, Zone 21, Zone 2 and Zone 22
Approvals	
Protection Class	Ex II 2GD Ex db IIC Gb; Ex eb IIC Gb; Ex nR IIC Gc; Ex tb IIIC Db
ATEX Certificate No	CML 18ATEX1268X CML 19ATEX4507 (Ex nR)
IECEx Certificate No	CML 18.0131X CML 21.0012X (Ex nR)
UKEX Certificate No	CML 21UKEX1132X CML 21UKEX4133X (Ex nR)
Construction & Test Standards	IEC/EN 62444 (Anchorage Type D), IEC/EN 60079-0, 1, 7, 15, 31
Marine Approvals	ABS: 19-LD1876514-1-PDA BV: 43523/B0 DNV: TAE0000BS
Additional Certifications	CCC: 2020312313000318 EAC: No EA3C RU C-GB.HA91.B.00264/21 EQM: 20-11-27224/Q20-11-000979/NB0007 Inmetro: IEx 14.0272X KCs: 17-KA4BO-0138X to 0149X PESO: P450038 SONCAP: LCOGB049552-0500
NEC/CEC	
NEC Protection Class	Class I, Zone I, AEx eb IIC Gb; Zone 21, AEx tb IIIC Db
CEC Protection Class	Class I Div 2 ABCD, Class II Div 2 EFG and Class III Ex db IIC Gb; Ex eb IIC Gb
c CSA us Certificate	1015065
Construction & Test Standards	UL2225, UL1203, UL514B, CSA C22.2 NO. 0-10, CSA C22.2 NO. 174-18, CSA 22.2 60079-0, CSA 22.2 60079-1, CSA 22.2 60079-7 and CSA 22.2 60079-31

Alternative Reversible Armour Clamping Ring Size Selection

Size Ref	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

Ordering Information

If brass is required please omit material selection
Format for ordering is as follows: Alternative Clamping Ring (R), add suffix R to ordering information

Cable Gland Type	Size	Thread	Material	(Optional)
453U	C	M32		R
453U	C	1.25	NP	R

Example Code: 453UCM32R
Please note all NPT entries should be state as a decimal.
Please refer to part code logic information page for further details on product options

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 through the clear silicone flameproof seal during installation and inspection.

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.

Step 1

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

Step 2

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

Step 3

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

Note: The cable gland installation instructions have a printed cable OD measure for if the cable OD is not known