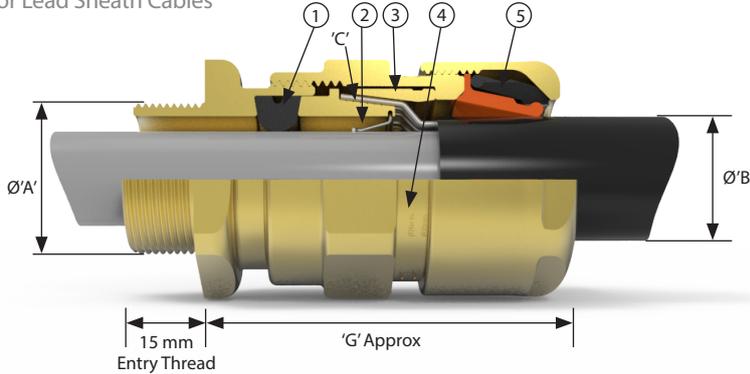




# 501/453/RAC/L

Flameproof, Increased Safety, Dust Protection and Restricted Breathing  
 Class - Zones Certified ATEX / IECEx / UKEX / c CSA us  
 For Lead Sheath Cables



- 1 Elastomeric Exd flameproof seal on cable inner sheath
- 2 Electrical Bond on the cables lead inner sheath
- 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/RAC 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. The gland provides an elastomeric seal on the cable inner sheath, and a low smoke, zero halogen IP and retention seal onto the cable outer sheath. 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*	Inner Sheath				Outer Sheath 'B'		Armour/Braid 'C'			Across Flats	Across Corners
			Std Seal (L) Min	Seal + Bond Max	Alt Seal (K) Min	Seal + Bond Max	Min	Max	Orientation 1	Orientation 2			
O	M20 <sup>2</sup>	½"	6.5	10.2	-	-	9.5	16.0	0.8/1.25	0.0/0.8	52.0	24.0	26.5
A	M20	¾" or ½"	-	-	9	12.5	12.5	20.5	0.8/1.25	0.0/0.8	53.0	30.0	32.5
B	M25	1" or ¾"	13.0	18	9.5	15.4	16.9	26.0	1.25/1.6	0.0/0.7	59.5	36.0	39.5
C	M32	1¼" or 1"	19.5	24.3	15.5	21.2	22.0	33.0	1.6/2.0	0.0/0.7	64.0	46.0	50.5
C2	M40	1½" or 1¼"	25.0	30.3	22	28	28.0	41.0	1.6/2.0	0.0/0.7	68.3	55.0	60.6
D	M50	2" or 1½"	31.5	41.9	27.5	34.8	36.0	52.6	1.8/2.5	0.0/1.0	79.0	65.0	70.8
E	M63	2½" or 2"	42.5	52.9	39	46.5	46.0	65.3	1.8/2.5	0.0/1.0	78.4	80.0	88.0
F	M75	3" or 2½"	54.5	64.9/64.3 <sup>1</sup>	49.5	58.3	57.0	78.0	1.8/2.5	0.0/1.0	83.7	95.0	104.0
G	M80	3½"	67.0	70	-	-	75.0	89.5	2.0/3.5	0.0/1.0	95.6	106.4	115.0
H	M90	3½"	67.0	75.0	-	-	75.0	89.5	2.0/3.5	0.0/1.0	95.6	115.0	130.0
J	M100	4"	77.0	89.5	-	-	88.0	104.5	2.5/4.0	0.0/1.0	95.6	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

<sup>1</sup> Smaller value is applicable when selecting reduced NPT entry option.  
<sup>2</sup> Size O is available with an M16 thread size.  
 \*Brass NPT entries are nickel plated as standard.

## Technical Data

Material Options	Manufactured in Brass, Nickel Plated Brass or 316L Stainless Steel
Ingress Protection	IP66, IP67 and IP68 (30 metres for 7 days, special instructions apply) to IEC/EN 60529 and NEMA 4X
Enclosure Protection	IK10 to IEC 62262
Deluge Protection	to DTS01
Operating Temperature	-60°C to +100°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 19ATEX1167X CML 19ATEX4507X (Ex nR)
IECEx Certificate No	CML 19.0045X CML 21.0012X (Ex nR)
UKEX Certificate No	CML 21UKEX1161X 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: 2020312313000313
	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-0129X to 0137X
	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	CSA1015065
Construction & Test Standards	UL 60079-0, UL 60079-7, UL 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, UL514B; UL1203; UL 2225



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

### Ordering Information

If brass is required please omit material selection information  
 Format for ordering is as follows: Lead sheath must be selected in optional (L) or Alternative Seal (K), Alternative Ring (R), add suffix L or K and R if required

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

Order Example: 453RCM32LR  
 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

# 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

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