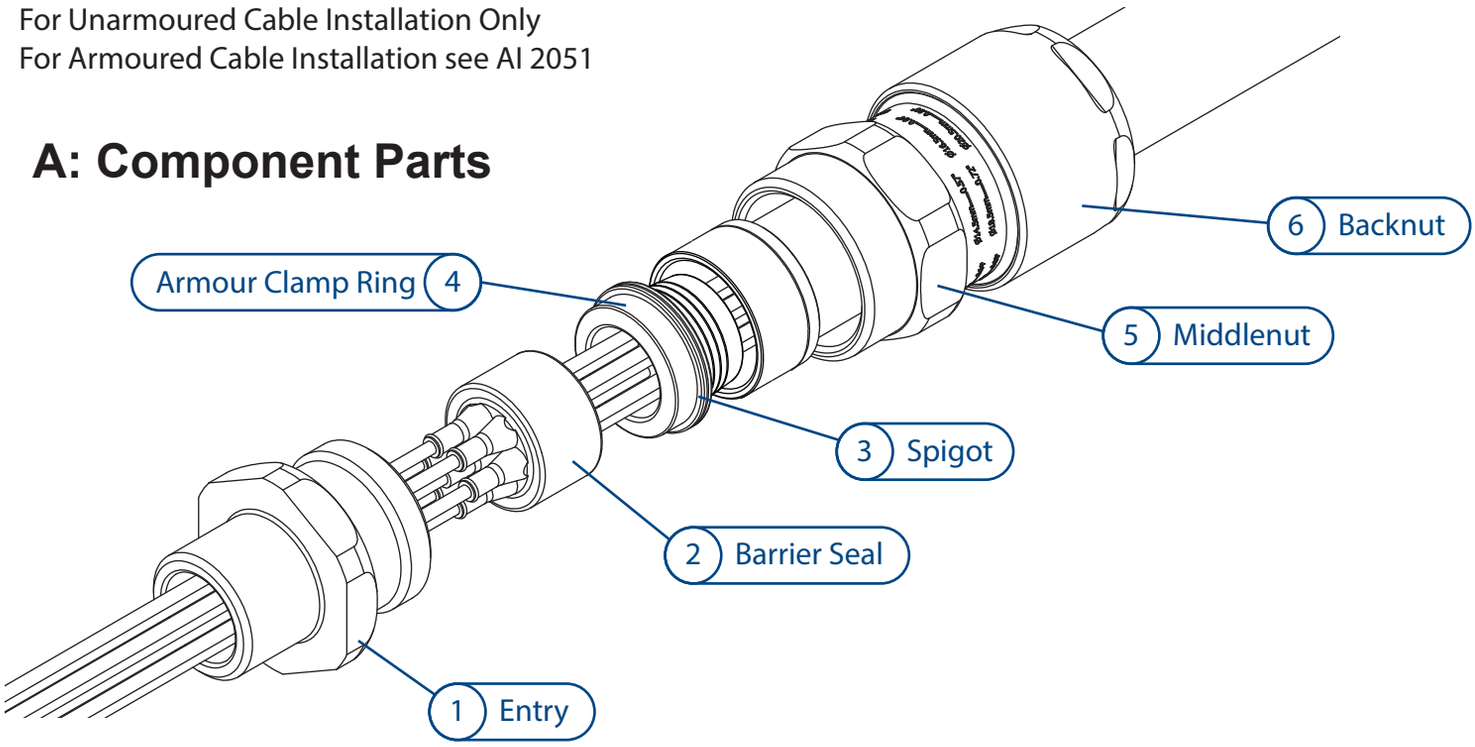
Cable Gland Assembly Instructions
P PSG 553/RAC

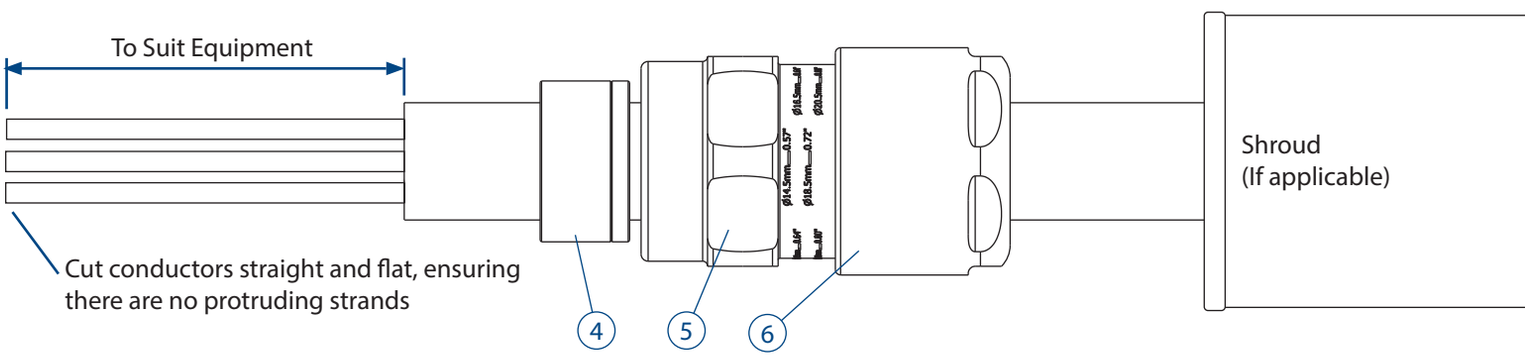
For Unarmoured Cable Installation Only
For Armoured Cable Installation see AI 2051

A: Component Parts



B: Cable Preparation

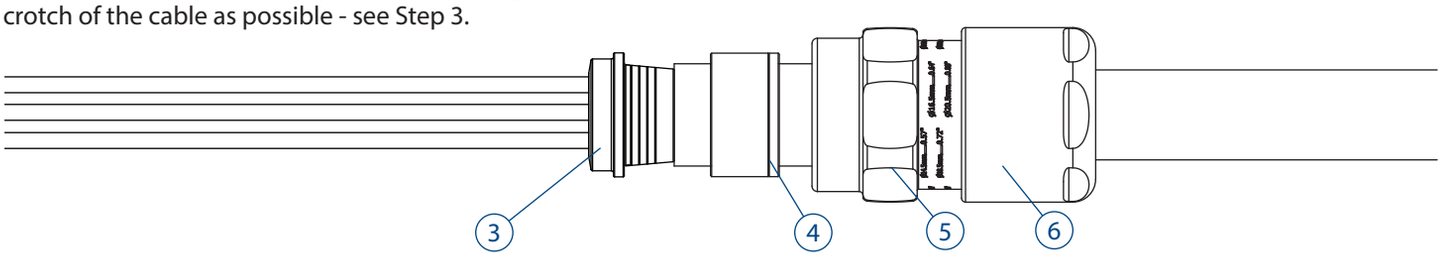
Slide shroud (if included), backnut (6), middlenut (5) and armour clamp ring (4) onto cable.
Orientation of clamping ring is not important.
Cut cable length and expose conductors to suit equipment
For preparation of Drain Wires refer to AI2028.



C: Installing Cable Gland

STEP 1: Slide Spigot Over Cable

Slide spigot (3) over cable until it meets the outer sheath of the cable.
The cable outer diameter may fit inside the spigot bore. If this is the case, the seal when installed must be pushed as far toward the crotch of the cable as possible - see Step 3.

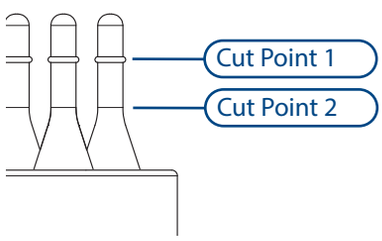


STEP 2: Prepare Seal for Installation

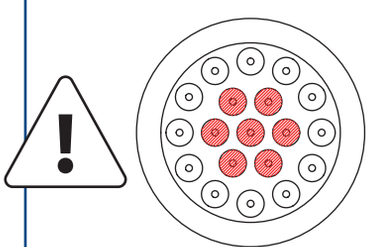
For all seal positions which are to be populated with conductors, cut the diaphragms down as per the instructions below. For this, Hawke recommends the use of flush cable cutters.

All unused positions must be left capped.

Cut Point Selection		
Seal Type	Over Insulation Diameter (mm)	Cut Point
Standard	≥1.5 ≤2.0	1
	>2.0 ≤4.0	2
B-Size Alternative (S)	≥4.5 ≤5.5	1
	>5.5 ≤6.5	2



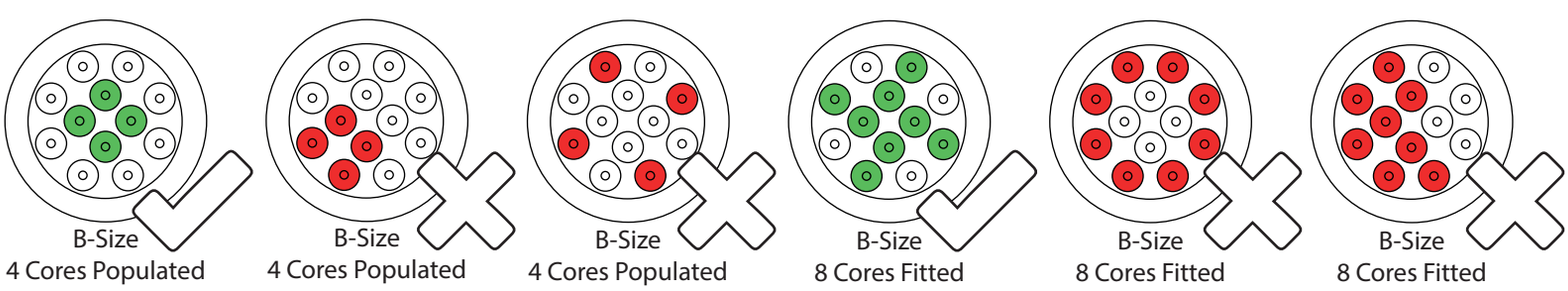
Critical Note
Applies to **C-Size** Seal Only



The 7x indicated positions above **must** be populated with conductors.

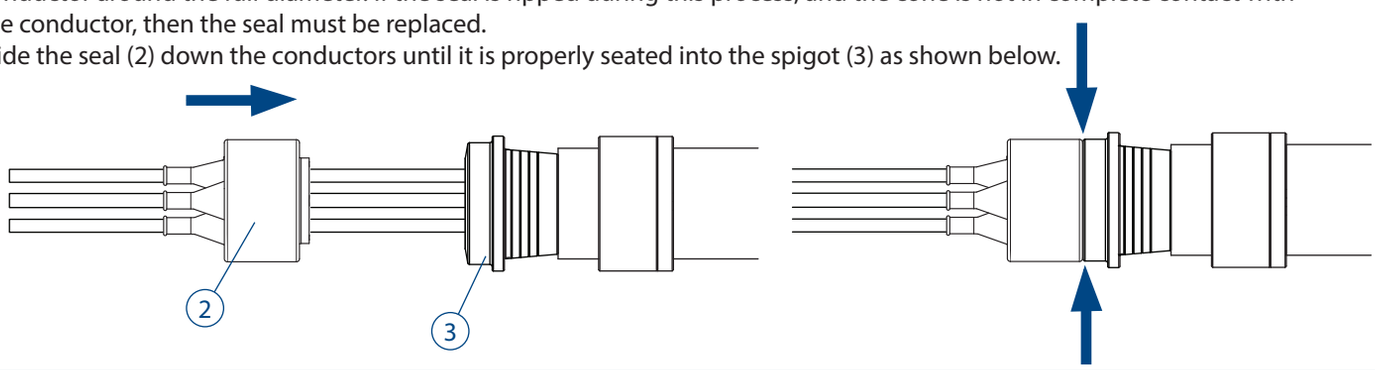
Hawke recommends that the seals are populated from the centre positions first, and are evenly distributed as much as possible to ensure consistent compression.

Examples of good and bad practice:



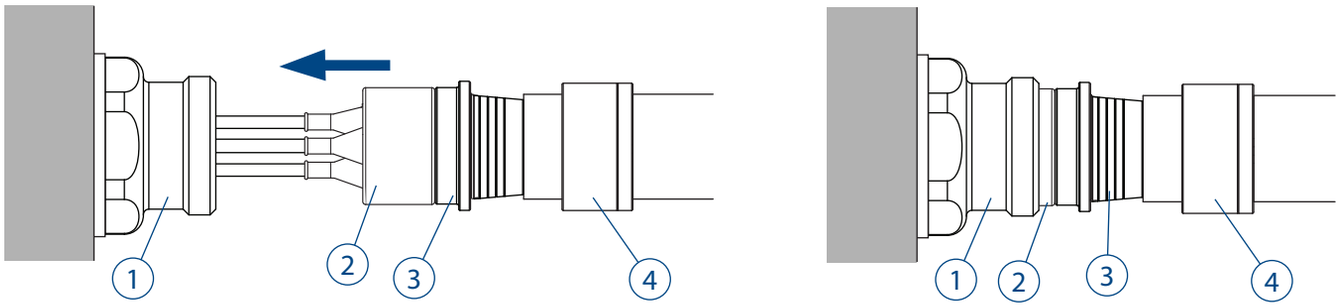
STEP 3: Install seal onto Conductors

Feed each conductor into the correct seal diaphragm position. Ensure the diaphragm cone is in complete contact with the conductor around the full diameter. If the seal is ripped during this process, and the cone is not in complete contact with the conductor, then the seal must be replaced.
Slide the seal (2) down the conductors until it is properly seated into the spigot (3) as shown below.



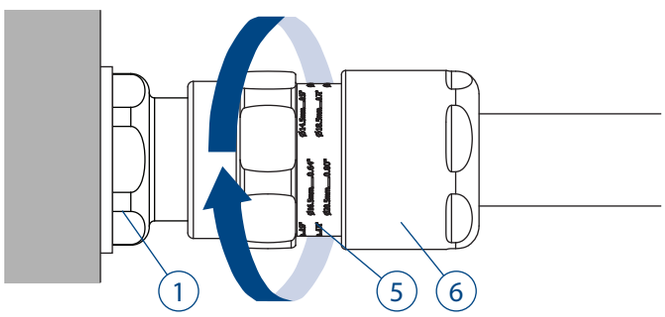
STEP 4: Install barrier seal into Entry

Fit entry (1) to enclosure. If required, use the appropriate IP washer.
Feed the conductors through the entry (1) and seat the seal (2) into the entry (1) until it meets the base of the entry bore.



STEP 5: Compress Barrier Seal

With the seal fully seated into the entry, tighten up the middle nut by hand until resistance is felt.
Using a wrench/spanner tighten the middlenut (5) the correct number of turns, refer to barrier seal compression table.

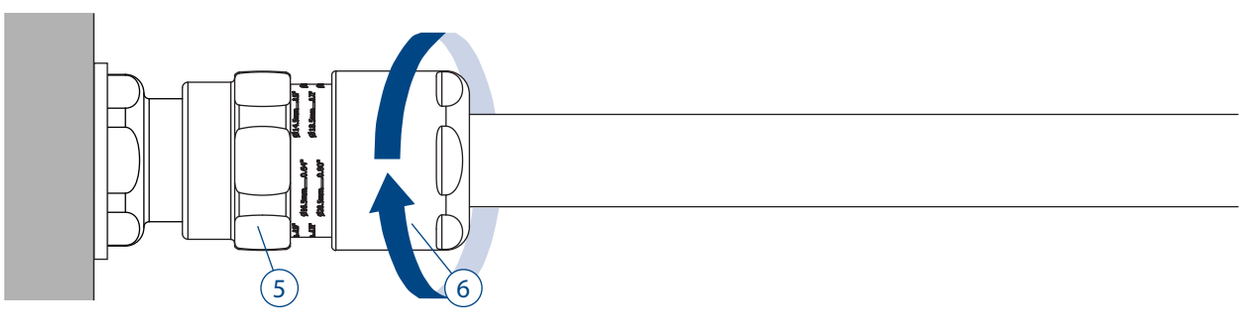


Barrier Seal Compression

Gland Size	Seal Type	No. of Turns
Os - O	Standard	2
A	Standard	3
B	Standard	5
B	Alternative (S)	4
C	Standard	3

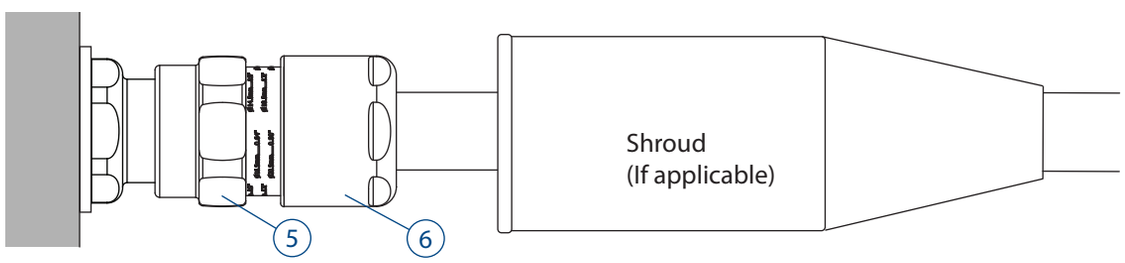
STEP 6: Install Backnut

Tighten the backnut (6) until a seal is formed around the cable.
Use a wrench/spanner to grip the middlenut (5).
While preventing the middlenut (5) turning, use a second wrench to apply one further full turn to the backnut (6).



STEP 7: Inspect Backnut

Use the middlenut (5) guide as an indication that the backnut (6) is in the correct position to suit cable diameter.
A diameter scale below is provided to assist this process.
Slide shroud over cable gland if applicable.



Images for illustration purposes only.
Product supplied may differ from that shown.

Diameter Scale (mm)
Correct when printed A4 Booklet Style

Technical Information
P PSG 553/RAC

TECHNICAL DATA

Cable Gland Type: P PSG 553/RAC
Equipment Type: Group II Barrier Cable Glands
Ingress Protection: IP66, IP67, IP68*
*30m for 7 days with thread sealant to EN60529
Operating Temp: -60°C to +100°C

CERTIFICATION DETAILS

Ex db IIC Gb / Ex eb IIC Gb /Ex nR IIC Gc / Ex tb IIIC Db

ATEX:	CML19ATEX1167X	UKEX: CML 21UKEX1161X
IECEx:	CML19.0045X	IEx:14.0272X
EAC:	No EA3C RU C-GB.HA91.B.00264/21	

ACCESSORIES

Hawke offer the following accessories to enable correct sealing and ground of cable gland.

Shroud: For additional corrosion protection
Locknut: To secure gland into position
Sealing Washer: For additional ingress protection
Earth Tag: For external bonding point
Serrated Washer: To prevent vibration loosening locknuts
Hawke GMC: Gland mounted cable clamp

INSTALLATION NOTES

1. Hawke cable gland entry threads are manufactured in accordance with Metric BS3643 (Metric) or ANSI/ASME B1.20.1 (NPT).
2. All cable glands must be installed by a suitably trained and competent individual.
3. When specifying cable glands, the installer should check material compatability with enclosure and environment.
4. In order to maintain effective sealing of an IP washer, cable gland entries must be installed perpendicular to the enclosure sealing faces and the enclosure sealing face must be smooth and free from damage.

SPECIAL CONDITIONS OF USE:

1. When used with unarmoured or braided cables, this cable gland is only suitable for fixed installations, the cable for which must be effectively clamped to prevent pulling and twisting. Does not apply when fitted with Hawke Gland Mounted Clamp (GMC)
2. When the glands are used for increased safety or dust protection the entry thread shall be suitably sealed (in accordance with IEC 60079-14) to maintain the ingress protection rating of the associated enclosure. Not applicable when Hawke IP66/67 seal is used.

TORQUE VALUES

All torque values below were generated on metallic mandrels. For cable, it is recommended that the assembly instructions are followed.

Torque Figures N/m

Gland Size	Os	O	A	B	B (alt)	C
Middlenut Torque	7	7	7	15	27	27
Backnut Torque	12	12	20	30	35	35

CABLE GLAND SELECTION TABLE

Size Ref.	Entry Thread Size		Cable Acceptance Details										Compressed Length	Maximum Length	Hexagon Dimensions	
			Conductors								Outer Sheath Diameter					
			Standard Seal				Alternative Seal (S)									
	Metric	NPT	Diameter (mm)		Quantity		Diameter (mm)		Quantity		Min	Max			Across Flats	Across Corners
			Min	Max	Min	Max	Min	Max	Min	Max						
Os	M20 / M16	½"	1.5	4.0	1	4	-	-	-	-	5.5	12.0	52.0	81.0	24.0	26.5
O	M20 / M16	½"	1.5	4.0	1	4	-	-	-	-	9.5	16.0	52.0	81.0	24.0	26.5
A	M20	½" / ¾"	1.5	4.0	1	7	-	-	-	-	12.5	20.5	53.0	83.0	30.0	32.5
B	M25	¾" / 1"	1.5	4.0	1	12	4.5	6.5	1	5	16.9	26.0	59.5	95.0	36.0	39.5
C	M32	1" / 1¼"	1.5	4.0	7	19	-	-	-	-	22.0	33.0	64.0	98.0	46.0	50.5

EU Declaration of Conformity in accordance with European Directive 2014/34/EU and UK Statutory Instrument 2016/1107

Manufacturer: Hawke International, Oxford Street West, Ashton-under-Lyne, OL7 0NA, United Kingdom
Equipment: P PSG/553/RAC
Provisions of the Directive fulfilled by the Equipment: Group II Category 2GD Ex db eb IIC Gb, Ex nR IIC Gc, Ex tb IIIC Db – IP66 67
Harmonized Standards used: EN 60079-0:2018, EN60079-1:2014, EN60079-7:2015+A1:2018, EN60079-15:2019, EN60079-31:2014

Notified Body for EU-Type Examination: CML B.V. 2776 Amsterdam, NLD
EU-type Examination Certificate: CML19ATEX1167X, CML19ATEX4507X (Ex nR)
Notified Body for production: 0598

Approved Body for UK-Type Examination: CML B.V. 2503 Chester, UK
UK-type Examination Certificate: CML 21UKEX1161X, CML21UKEX4133X (Ex nR)
Approved Body for production: 1180

On behalf of the above named company, I declare that on the date the equipment, accompanied by this declaration, is placed on the market the equipment conforms with all technical and regulatory requirements of the above listed directives.

Andrew Reid
Technical Manager

Hawke International UK
Oxford Street West,
Ashton-Under-Lyne,
Lancashire, OL7 0NA, UK

Tel: +44 (0) 141 810 9644
Web: www.hubbell.com/hawke
E-mail: hhsales@hubbell.com