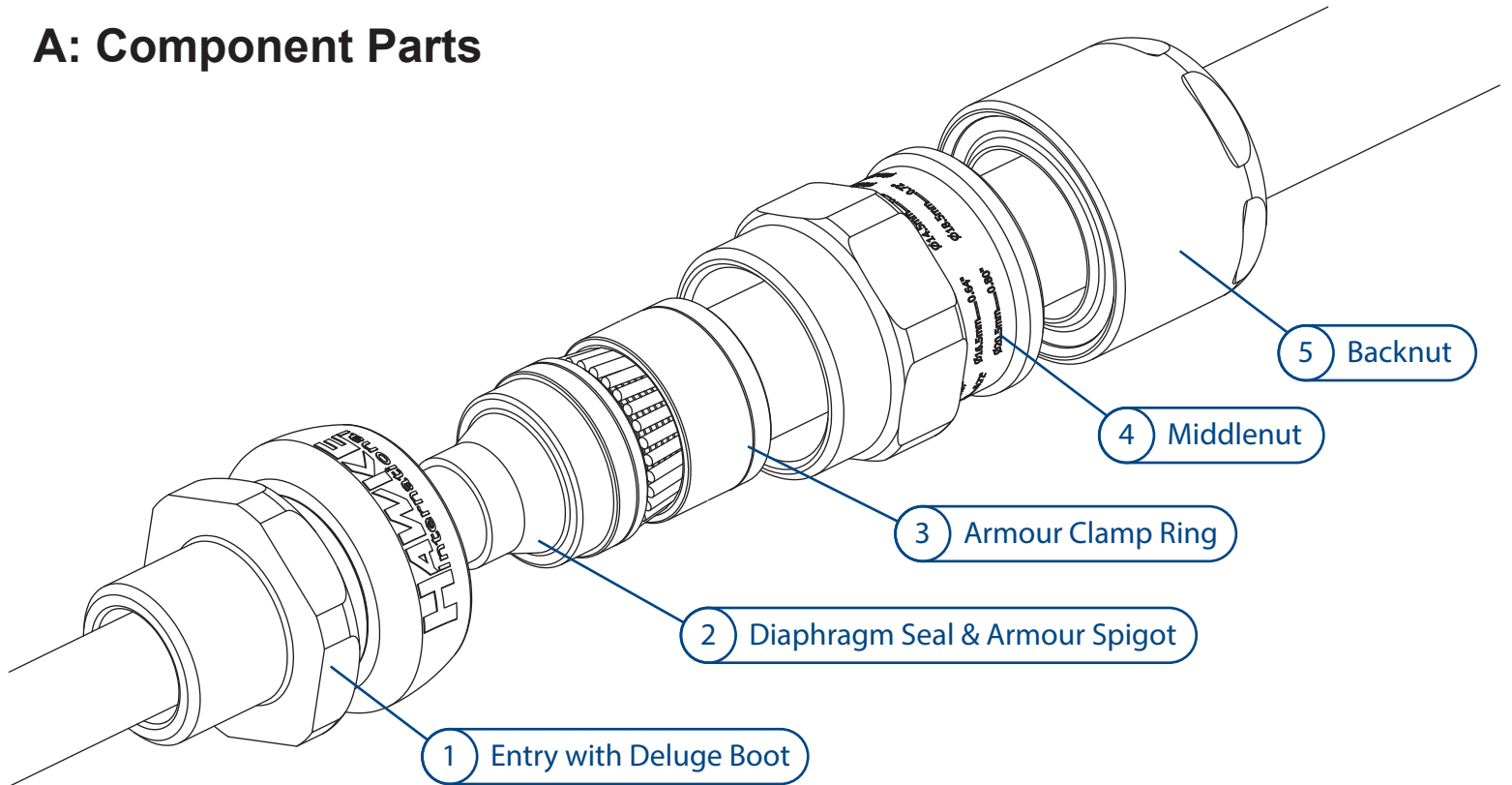
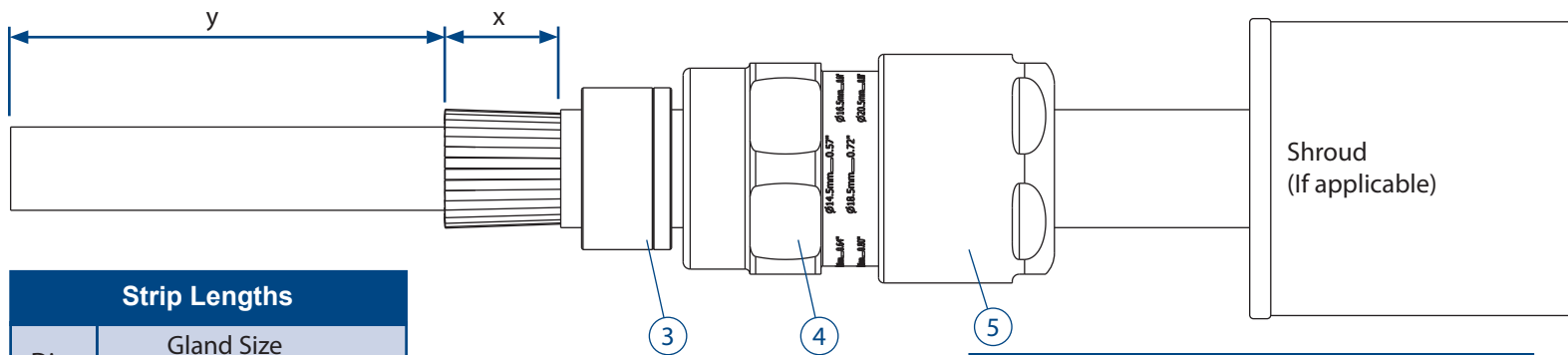


A: Component Parts



B: Cable Preparation

Slide shroud (if included), backnut ⑤, middlenut ④ and armour clamp ring ③ onto cable.
 Confirm orientation of armour clamp ring is correct (see table below).
 Cut cable length, strip outer sheath and cut armour to lengths as shown in table below.
 Note: Ensure plastic wrapping is removed from inner sheath of cable



Strip Lengths			
Dim	Gland Size		
	Os-A	B-C2	D-F
x	20mm	25mm	32mm
y	To suit equipment		

Armour Clamp Ring Orientation		
Gland Size	Orientation	
	Equipment Side	Equipment Side
Os-A	0.8 - 1.25mm	0 - 0.8mm
B	1.25 - 1.6mm	0 - 0.7mm
C-C2	1.6 - 2.0mm	0 - 0.7mm
D-F	1.8 - 2.5mm	0 - 1.0mm

Tape Armour
 After tape is spread, ensure ends are trimmed at 90° as shown

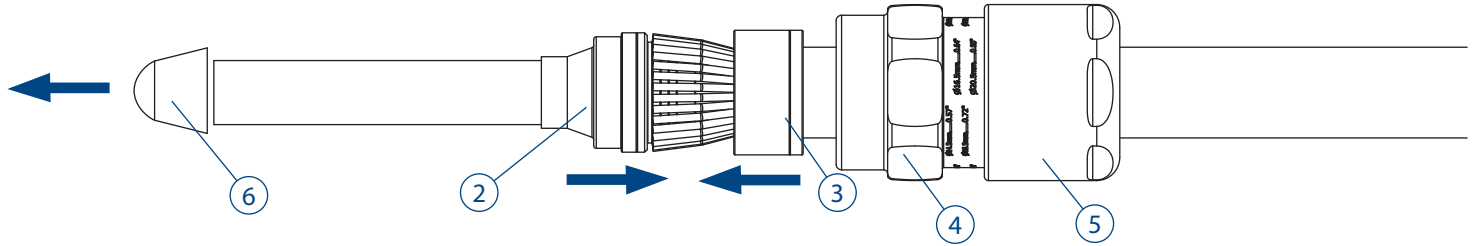
C: Installing Cable Gland

STEP 1: Install Diaphragm Seal

Push the cable through the diaphragm seal ②. Discard protective cap ⑥.

Push armour/braid up to spigot shoulder. Slide clamping ring ③ up to the armour/braid by hand.

Note: Diaphragm seal must be in contact with cable inner sheath. Remove any plastic wrapping from inner sheath.



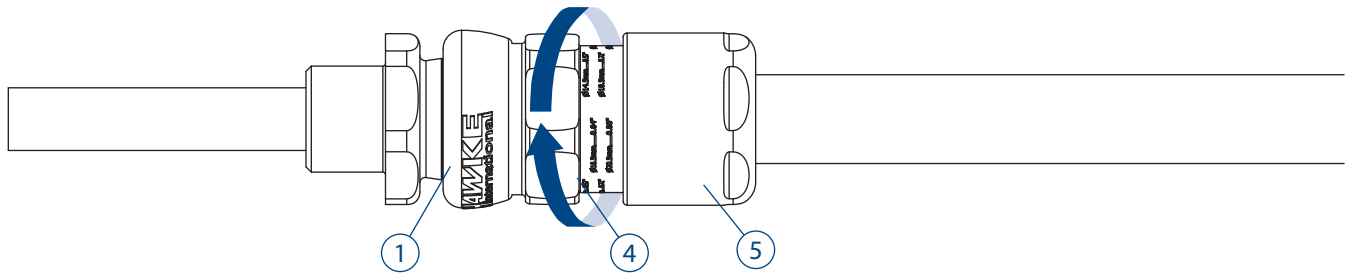
STEP 2: Clamp Armour/Braid

Slide middle nut ④ up to entry and hand tighten.

Support the cable to prevent it twisting.

Grip the entry ① with a spanner/wrench.

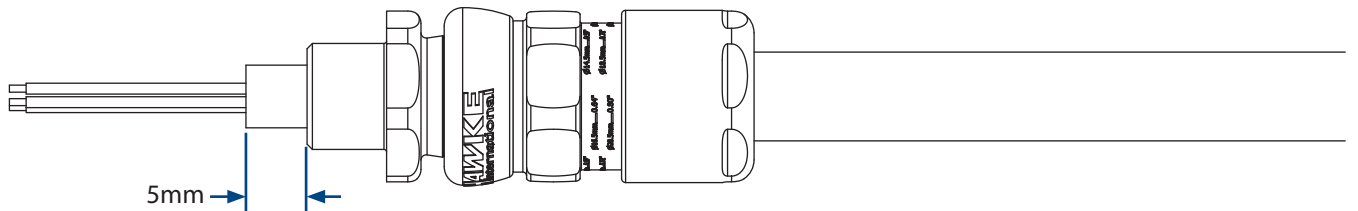
Use a second spanner/wrench to tighten half to three quarters of a turn.



STEP 3: Strip Inner Sheath

Strip inner sheath to suit application.

Recommended exposed length of inner sheath is 5mm as shown below.

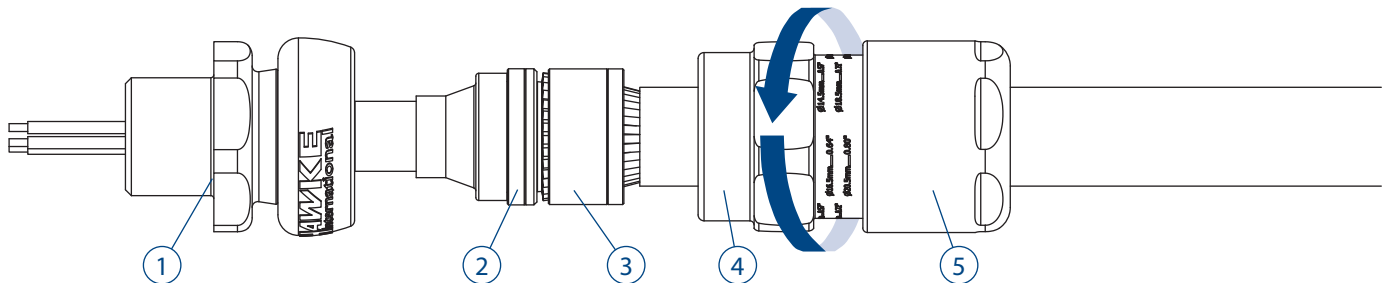


STEP 4: Inspect Armour/Braid

Unscrew the middle nut ④. The armour clamp ring ③ should now be locked in place.

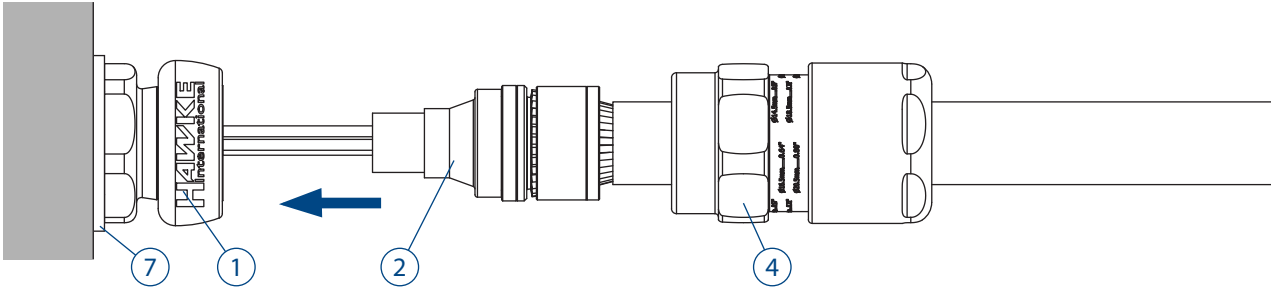
Visually inspect that the armour/braid has been successfully clamped between the spigot ② and the armour clamp ring ③.

If clamping is not satisfactory, repeat step 2.



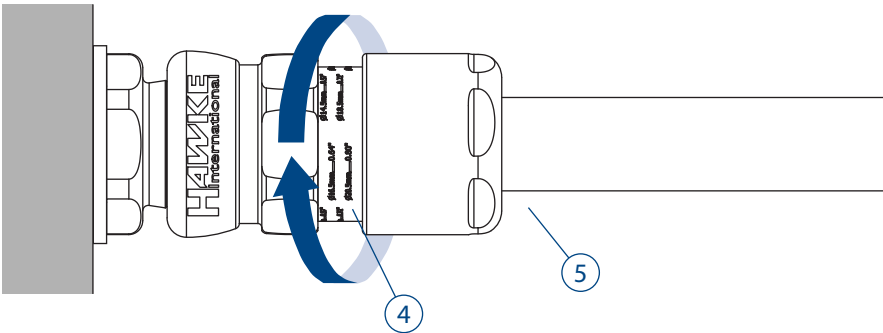
STEP 5: Fit to Enclosure

Use a wrench to fit entry ① into enclosure. If required, use the appropriate IP washer ⑦.
Slide cable through entry ① until diaphragm ② is seated in the entry.
Hand tighten the middle nut ④ to entry and add 1/4 turn with a wrench.



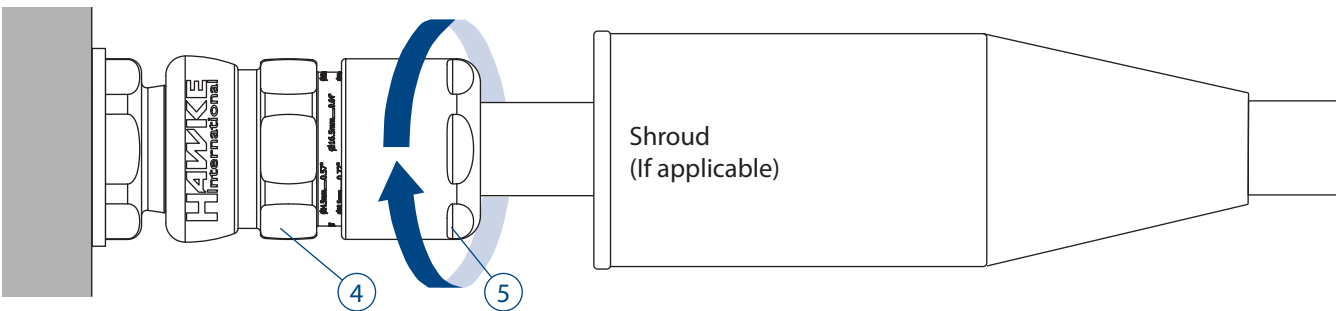
STEP 6: Install Backnut

Tighten the backnut ⑤ until a seal is formed around the cable.
Use a wrench/spanner to grip the middle nut ④.
While preventing the middle nut ④ turning, use a second wrench to apply one further full turn to the backnut ⑥.



STEP 7: Inspect Backnut

Use the middle nut ④ guide as an indication that the backnut ⑤ 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.



TECHNICAL DATA

Cable Gland Type: 153 UNIV
Equipment Type: Industrial General Purpose
Ingress Protection: IP66, IP67, IP68*, IP69, NEMA 4X
 *30m for 7 days with thread sealant;
 See AI464 for sealant application instructions;
 10m for 24hrs no thread sealant, Os-C size only
Operating Temp: -60°C to +80°C

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

INSTALLATION NOTES

1. Cable gland entry threads are machined in accordance with BS 3643 6g (Metric) or ANSI/ASME B1.20.1 (NPT)
2. The enclosure material shall be compatible with the cable gland.
3. To maintain IP 66/67/69 ratings, Hawke recommends the use of a Hawke IP washer or other approved sealing method. To maintain IP68 refer to AI464.
4. To ensure effective sealing of an IP washer, enclosure sealing face surface finish shall be smooth and free from damage. The entry hole should be drilled perpendicular to the sealing face.
5. When using enclosures with plain through holes, Hawke recommends nominal +0.3mm of diametric clearance over the major diameter of the thread. For example, to accommodate an M20 entry, drill 20.3 diameter.
6. Allowable enclosure wall thickness is dependent on gland entry thread length, style of enclosure entry hole (threaded or plain), protection concept of the installation and the required use of accessories. The installer should be aware of and specify for these requirements.
7. External earth tags are recommended to be fitted adjacent to the flange of the cable gland entry, so they remain in direct contact with the cable gland. Any sealing washer should be placed between tag and enclosure. For more information on placement of accessories, visit www.hubbell.com/hawke.

CABLE GLAND SELECTION TABLE

Size Ref.	Entry Thread Size		Cable Acceptance Details						Max Length	Hexagon Dimensions	
			Inner Sheath		Outer Sheath		Steel Wire Armour/ Tape/Braid			Across Flats	Across Corners
	Metric	NPT	Min.	Max.	Min.	Max.	Orientation 1	Orientation 2			
Os ¹	M20	½"	3.5	8.1	5.5	12.0	0.8/1.25	0/0.8	72.5	24.0	26.5
O ¹	M20	½"	6.5	11.4	9.5	16.0	0.8/1.25	0/0.8	72.5	24.0	26.5
A	M20	½" - ¾"	8.4	14.3	12.5	20.5	0.8/1.25	0/0.8	75.3	30.0	32.5
B	M25	¾" - 1"	11.1	19.7	16.9	26.0	1.25/1.6	0/0.7	81.0	36.0	39.5
C	M32	1" - 1¼"	17.6	26.5	22.0	33.0	1.6/2.0	0/0.7	87.0	46.0	50.5
C2	M40	1¼" - 1½"	23.1	32.5	28.0	41.0	1.6/2.0	0/0.7	96.3	55.0	60.6
D	M50	1½" - 2"	28.9	42.3/44.4	36.0	52.6	1.8/2.5	0/1.0	123.0	65.0	70.8
E	M63	2" - 2½"	39.9	54.3/56.3	46.0	65.3	1.8/2.5	0/1.0	119.5	80.0	88.0
F	M75	2½" - 3"	50.5	65.3/68.2	57.0	78.0	1.8/2.5	0/1.0	126.3	95.0	104.0

1 - Sizes Os and O are available with an M16 thread size. If M16 entry is used on O size cable glands the maximum cable inner sheath diameter is limited to 10.9mm.

CABLE GLAND CLASSIFICATION

Material			Mechanical Properties				Electrical Properties				External Influences			Sealing System	
Metal	Non-Metallic	Composite	Without Cable Anchorage	With Cable Anchorage	Impact Category	Cable Retention (Armoured Cable)	Equipotential Bonding	Connection to Metallic Layers	Protective Connection to Earth	Insulation Characteristics	Ingress Protection	Temperature Range	Resistance to Salt and Sulphur Dioxide Laden Atmospheres	Single Orifice Seal	Multi-Orifice Seal
Y	X	X	X	A	B	B	Y	Y	C	X	IP66/IP67 IP68/IP69	-60° To 80°	Y	Y	X

EU Declaration of Conformity in accordance with European Directive 2014/34/EU

Standards used: EN 62444:2013

On behalf of the aforementioned 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.

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 A. Reid
 Technical Manager