CCG CABLE TERMINATIONS

A2F-HTF-FC

Ex db I/IIC, Ex eb I/IIC, Ex nR IIC, Ex ta IIIC

COMPRESSION GLAND with Conduit Connection* for Single or Multi-Core Unarmoured Heat Trace Cable

(*Conduits with a swivel end connector only.)

Features and Benefits

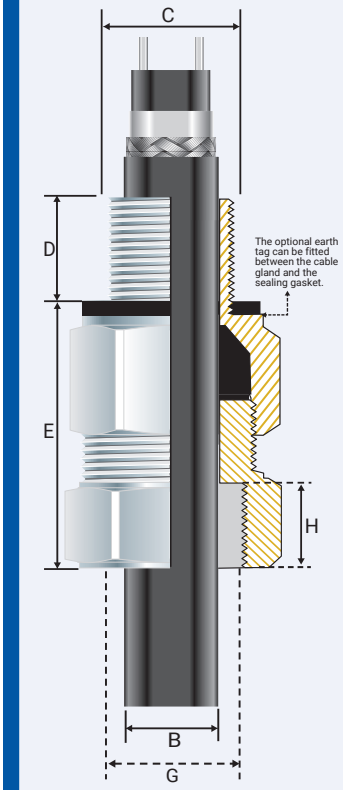
- Passes the IECEx / ATEX / UKEX 100% pull test, so no additional cable clamping is required.
- For indoor, outdoor, Group I, II, III, Zone 1, 2, 20, 21 and 22 hazardous areas.
- Fitted with a specially formulated elastomeric displacement seal, giving superior cable retention, explosion protection, and an IP rating.
- Precision manufactured from high-quality brass (Marine Grade Electroless Nickel Plated™) available in aluminium or stainless steel 316/316L on request. (Note: Aluminium is not suitable for Group I applications.)
- With an M25 female thread to allow the attachment of flexible conduits. Alternative thread sizes can be provided on request.
- Supplied with a thread-sealing gasket with parallel threads only.

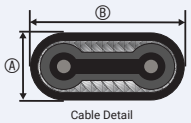
Technical Data

Type:	A2F-HTF-FC
Gland Material:	Brass (Marine Grade Electroless Nickel Plated™), Aluminium, Stainless Steel 316/316L
Seal Material:	Standard Thermoset Elastomer or Extreme Temperature Seals
Sealing Gasket Material:	HDPE, Nylon 66 or PTFE
Cable Type:	Single or Multi-core Unarmoured Heat Trace Housed in Conduit
Sealing Area:	Outer Sheath
Optional Accessories:	Adaptor, Reducer, Earth Tag, Locknut and Serrated Washer
Note:	The installer should ensure that the materials are suitable for the installation environment

Standards and Certifications

Equipment Protection Levels:	IECEx/INMETRO: Ex db I Mb, Ex eb I Mb, Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da ATEX/UKEX: Ⓔx I M2 Ex db I Mb, Ex eb I Mb, Ⓔx II 2/3 G 1D Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da	
Continuous Operating Temp:	Standard Seals:-60°C to +95°C /100°C (HDPE/ Nylon Sealing Gasket) Extreme Temp. Seals: -60°C to +160°C (PTFE Sealing Gasket)	
Conformance:	Standard:	Certificate:
IEC/BS EN	IEC/BS EN 62444	CML 14CA364
IECEx	IEC 60079 Part 0, 1, 7, 15, 31	IECEx TSA 23.0026
ATEX	EN 60079 Part 0, 1, 7, 31 EN 60079 Part 15	CML 20ATEX1026 CML 22ATEX4116
UKEX	BS EN 60079 Part 0, 1, 7, 31 BS EN 60079 Part 15	CML 21UKEX1013 CML 22UKEX4117
INMETRO (Brazil)	ABNT NBR IEC 60079 Part 0, 1, 7, 15, 31	TÜV 24.0267
SANS	SANS/IEC 60079 Part 0, 1, 7, 15, 31	MASC S/20-9022
IP66/68 850m – Parallel	IEC 60529	CML 15Y728
IP65/66 – Tapered	IEC 60529	
IP68 - Tapered and approved grease	IEC 60529	IECEx TSA 23.0026
Deluge Protection	DTS-01	CML 14CA370-2
Corrosion Protection	ASTM B117-11, BS EN ISO 3231	EXOVA N968667





Cable Detail

PATENTED

Conditions for Safe Use - X

- None.

Product Code	Gland Size Reference	Metric Entry Thread		NPT Entry Thread		Conduit Thread		Cable Detail				Max Length 'E'	Hexagonal Detail		Install. Torque Value Nm
		'C'	Min 'D'	'C'	Min 'D'	'G'	Length 'H'	Min 'A'	Max 'A'	Min 'B'	Max 'B'		Max 'Flats'	Max 'Crns'	
0451-0	0-20s	M20x1.5	15	½/¾	15	M25x1.5	10	4.2	6.4	8.8	11.0	38.0	25/27	28/30	32.5
045101	1-20	M20x1.5	15	½/¾	15	M25x1.5	10	4.2	8.0	10.9	14.0	42.0	27	30	32.5
045102	2-25	M25x1.5	15	¾/1	15/19	M25x1.5	10	4.8	7.0	13.7	16.0	43.0	35	39	47.5

All dimensions except NPT are in mm. Male Entry Thread 'C' and Female Entry Thread 'B' can only be any combination of either NPT or Metric threads. Intermediate thread sizes are available on request. NPT threads should be tightened 'wrench tight'.

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A2F-HTF-FC Compression Gland

ENCLOSURES AND EQUIPMENT TO WHICH CABLE GLANDS ARE FITTED:-

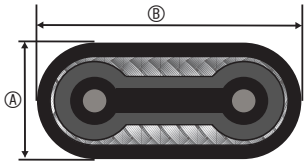
- Must be made from materials which are compatible with the cable gland materials.
- Have a sealing area around the cable gland entry point with a surface roughness < Ra 6.3 µm.
- Have entries that are perpendicular to the enclosure face in the area where the cable gland will seal to within 2.5°.
- Are sealed using the supplied sealing gasket (parallel threads) or by fully tightening into a threaded entry (tapered threads). Note that for tapered threads the IP rating can be improved to IP68 with the use of a suitable thread sealant.

MUST HAVE THREADED ENTRIES

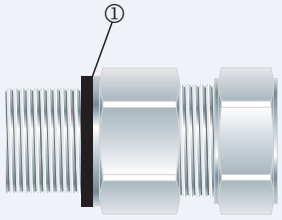
- The same thread size as the cable gland. (Thread adapters should be used to correct any mismatch).
- With a thread tolerance of metric class '6H' or equivalent.
- Where the thread length is a minimum of 10mm for Ex d applications or 3mm for all other applications

OR CLEARANCE HOLES (not Ex d)

- Where the hole size is the thread nominal size with a tolerance of +0.1 to +0.7mm. (e.g. the clearance hole for an M20 thread will have a diameter between 20.1mm and 20.7mm).
- Through material that is between 1mm and 12mm thick. (Thicker materials can be accommodated using glands with extended entry threads.)

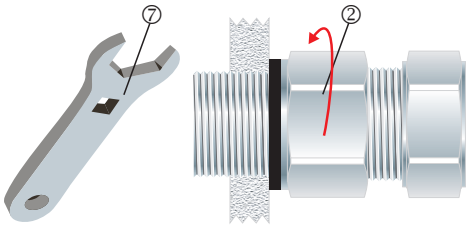


1. Measure the cable across its widest Ⓑ and narrowest Ⓐ dimensions to check for the correct fit.



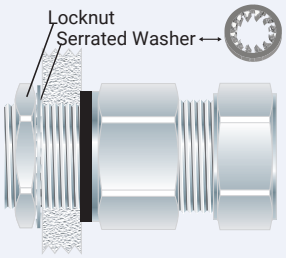
If the gland has NPT entry threads fitted to a threaded entry then IP68 (2m) can be achieved by applying one of the following tested and approved grease types to the thread:- Renolit Lubrene CA700 or LX220 EP2, Renolit LC-WP2 or Moly LX2, or Dow Corning 4 Electrical Compound.

2. To maintain IP66/68, ensure the gasket ① is in place.

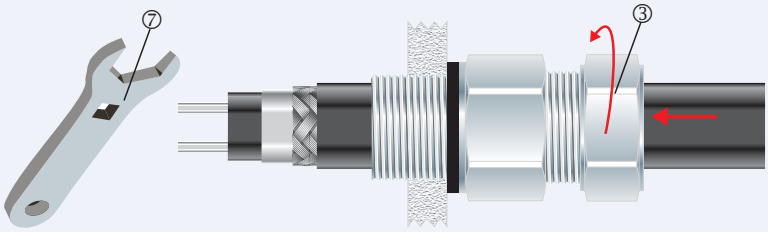


3. Screw the gland unit into the apparatus. Tighten the inner until hand tight ② using a CCG Spanner ⑦ with ¼ turn.

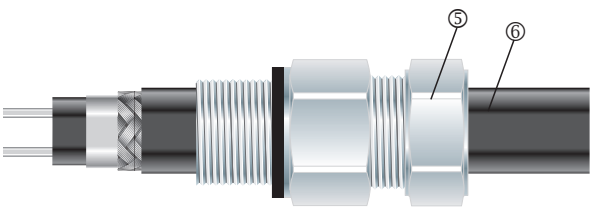
Alternative installation through an unthreaded entry.



If the apparatus is untapped use a locknut.



4. Pass the cable end through the conduit assembly and the gland assembly. Tighten the outer ③ to the installation torque using a CCG Spanner ⑦ to produce a seal and grip on the cable.



5. Fit the threaded conduit end ⑥ into the conduit threads ⑤ as indicated.