

A2F-R

Div. 2, Exdb IIC, AEx/Ex e IIC, AEx/Ex tb IIIC, AEx/Ex nR IIC
COMPRESSION GLAND for Unarmoured Cable / Tray Cable

Features and Benefits

- Passes the IECEx / UKEX / ATEX 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 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 not suitable for Group I applications.)
- Supplied with a thread sealing gasket (parallel threads only).



Technical Data

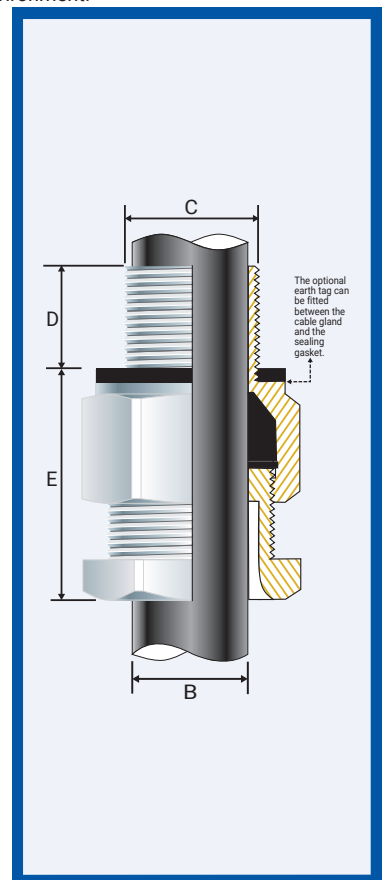
Type:	A2F-R
Gland Material:	Brass (Marine Grade Electroless Nickel Plated™), Aluminium or Stainless Steel 316/316L
Seal Material:	Standard Thermoset Elastomer or Extreme Temperature Seals
Sealing Gasket Material:	HDPE, Nylon 66 or PTFE
Cable Type:	Unarmoured, Tray Cable
Sealing Area:	Outer Sheath
Optional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

Temperature Range

When fitted with sealing gaskets the temperature range for the gland will be:-
 Sealing gasket material: Standard Seals: -60°C and +95°C/100°C(HDPE/Nylon Sealing Gasket)
 Extreme Temp. Seals: -60°C and +160°C (PTFE Sealing Gasket)

Certification Details

Equipment Protection Levels:	NEC / CEC: Class I Div. 2 Gr ABCD, Class II Div. 2 Gr FG, Class III Division 2 Ex db IIC Gb, Class I Zone 1 AEx eb IIC Gb / Ex eb IIC Gb Zone 20 AEx ta IIIC Da / Ex ta IIIC Da, Class I Zone 2 AEx nR IIC Gc / Ex nR IIC Gc, IP66/67/68, IP65, Type 4X IECEx: Ex db eb I Mb, Ex db eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da	
Conformance:	Standard:	Certificate:
CEC	CSA C22.2 No. 18.3-12, 174:2018 & 213:2017	E115595
NEC	CSA C22.2 No. 60079 - 0, 1, 7, 15, 31	
IECEX	UL514B, UL121201 UL 60079 - 0, 7, 15, 31	
IP66/67/68 850m - Parallel	IEC 60079 - 0, 1, 7, 15, 31	IECEX TSA 23.0026
IP68 – Tapered and approved grease	IEC 60529	CML 15Y728
Nema Type 4X	IEC 60529	IECEX TSA 23.0026
Deluge Protection	NEMA 250	E115595
Corrosion Protection	DTS-01	CML 14CA370-2
EMC Compatible	ASTM B117-11, BS EN ISO 3231	EXOVA N968667
	EN 55011, + A1, EN 55022	SGS EMC305079/1



Installation Requirements / Specific Conditions of Use

- The cable glands, sizes M20, ¾" NPT and smaller, shall only be used on fixed installations where the cable is clamped, or stress applied to the cable in the gland is prevented. (NEC/CEC only)
- The cable glands, when supplied with suffix 'FC', shall only be used with an approved UL 514B conduit fitting. (NEC/CEC only)
- The cable glands shall only be used if the temperature, at the point of entry, is as specified above.

NPT Entry Thread

Gland Size Ref	Product Code	NPT Entry Thread		Alternative Thread Product Code	NPT Entry Thread		Cable Detail		Maximum Length 'E'	Hexagonal Detail	
		'C'	Min 'D'		'C'	Min 'D'	Min 'B'	Max 'B'		Max 'Flats'	Max 'Crns'
00-20ss	059000-012NPT-MNA	½	0.590	059000-034NPT-MNA	¾	0.590	0.118	0.335	0.984	0.945	1.063
0-20s	05900-012NPT-MNA	½	0.590	0590-0-034NPT-MNA	¾	0.590	0.275	0.472	0.984	0.945	1.063
1-20	059001-012NPT-MNA	½	0.590	059001-034NPT-MNA	¾	0.590	0.433	0.590	1.181	1.063	1.181
2s-25s	059022-034NPT-MNA	¾	0.590	059022-001NPT-MNA	1	0.748	0.453	0.689	1.181	1.377	1.535
2-25	059002-034NPT-MNA	¾	0.590	059002-001NPT-MNA	1	0.748	0.590	0.787	1.181	1.377	1.535
3s-32s	059033-001NPT-MNA	1	0.748	059033-114NPT-MNA	1½	0.748	0.630	0.866	1.181	1.653	1.850
3-32	059003-001NPT-MNA	1	0.748	059003-114NPT-MNA	1½	0.748	0.787	1.043	1.181	1.653	1.850
4s-40s	059044-114NPT-MNA	1½	0.748	059044-112NPT-MNA	1½	0.826	0.866	1.240	1.495	2.046	2.322
4-40	059004-114NPT-MNA	1½	0.748	059004-112NPT-MNA	1½	0.826	1.023	1.338	1.495	2.046	2.322
5s-50s	059055-112NPT-MNA	1½	0.826	059055-002NPT-MNA	2	0.826	1.141	1.495	1.810	2.558	2.873
5-50	059005-112NPT-MNA	1½	0.826	059005-002NPT-MNA	2	0.826	1.338	1.751	1.810	2.558	2.873
6s-63s	059066-002NPT-MNA	2	0.826	059066-212NPT-MNA	2½	1.181	1.495	1.968	2.046	3.148	3.542
6-63	059006-002NPT-MNA	2	0.826	059006-212NPT-MNA	2½	1.181	1.751	2.224	2.046	3.148	3.542
7s-75s	059077-212NPT-MNA	2½	1.181	059077-003NPT-MNA	3	1.259	1.968	2.440	2.125	3.778	4.250
7-75	059007-212NPT-MNA	2½	1.181	059007-003NPT-MNA	3	1.259	2.204	2.656	2.125	3.778	4.250
8-80	059008-003NPT-MNA	3	1.259	-	-	-	2.125	2.715	2.676	3.778	4.250
9s-90s	059099-003NPT-MNA	3	1.259	059099-312NPT-MNA	3½	1.299	2.361	2.952	2.755	4.368	4.919
9-90	059009-003NPT-MNA	3	1.259	059009-312NPT-MNA	3½	1.299	2.873	3.207	2.755	4.368	4.919
10-10	059010-312NPT-MNA	3½	1.299	059010-004NPT-MNA	4	1.338	3.188	3.621	2.755	4.919	5.549
11-110	059011-004NPT-MNA	4	1.338	-	-	-	3.581	3.975	2.755	5.313	5.982

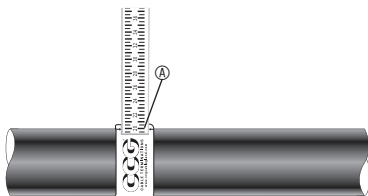
All dimensions are in inches. NPT threads should be tightened 'wrench tight'

Metric Entry Thread

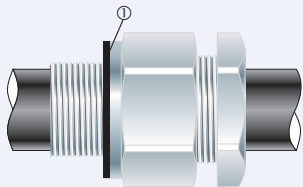
Gland Size Ref	Product Code	Metric Entry Thread		Cable Detail		Maximum Length 'E'	Hexagonal Detail		Tightening Torque Nm/lb ft
		'C'	Min 'D'	Min 'B'	Max 'B'		Max 'Flats'	Max 'Crns'	
00-20ss	059000-MNA	M20x1.5	0.591	0.118	0.335	0.984	0.945	1.063	33/24
0-20s	0590-0-MNA	M20x1.5	0.591	0.276	0.472	0.984	0.945	1.063	33/24
1-20	059001-MNA	M20x1.5	0.591	0.433	0.591	1.181	1.063	1.181	33/24
2s-25s	059022-MNA	M25x1.5	0.591	0.453	0.689	1.181	1.378	1.535	48/35
2-25	059002-MNA	M25x1.5	0.591	0.591	0.787	1.181	1.378	1.535	48/35
3s-32s	059033-MNA	M32x1.5	0.591	0.630	0.866	1.181	1.654	1.850	55/41
3-32	059003-MNA	M32x1.5	0.591	0.787	1.043	1.181	1.654	1.850	55/41
4s-40s	059044-MNA	M40x1.5	0.591	0.866	1.240	1.496	2.047	2.323	65/48
4-40	059004-MNA	M40x1.5	0.591	1.024	1.339	1.496	2.047	2.323	65/48
5s-50s	059055-MNA	M50x1.5	0.591	1.142	1.496	1.811	2.559	2.874	83/61
5-50	059005-MNA	M50x1.5	0.591	1.339	1.752	1.811	2.559	2.874	83/61
6s-63s	059066-MNA	M63x1.5	0.591	1.496	1.969	2.047	3.150	3.543	98/72
6-63	059006-MNA	M63x1.5	0.591	1.752	2.224	2.047	3.150	3.543	98/72
7s-75s	059077-MNA	M75x1.5	0.591	1.969	2.441	2.126	3.780	4.252	116/85
7-75	059007-MNA	M75x1.5	0.591	2.205	2.657	2.126	3.780	4.252	116/85
8-80	059008-MNA	M80x2.0	0.787	2.126	2.717	2.677	3.780	4.252	120/89
9s-90s	059099-MNA	M90x2.0	0.787	2.362	2.953	2.756	4.370	4.921	120/89
9-90	059009-MNA	M90x2.0	0.787	2.874	3.209	2.756	4.370	4.921	120/89
10-10	059010-MNA	M100x2.0	0.787	3.189	3.622	2.756	4.921	5.551	120/89
11-110	059011-MNA	M110x2.0	0.787	3.583	3.976	2.756	5.315	5.984	175/129
12-120	059012-MNA	M120x2.0	0.787	3.976	4.291	2.756	5.512	6.220	175/129
13-10	059013-MNA	M130x2.0	0.787	4.291	4.567	2.756	5.748	6.457	175/129

Dimensions are in inches

FITTING INSTRUCTION

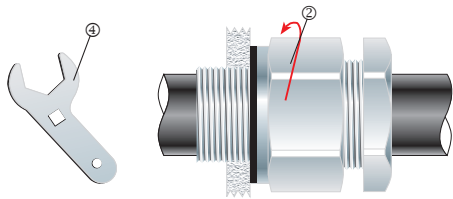


- For accurate sizing, use a CCG Dimension Tape (A) on the outer cable sheath.



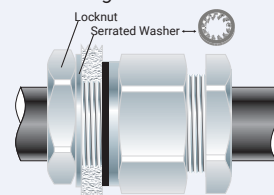
- To maintain IP66/68, ensure the gasket (1) is in place.

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.

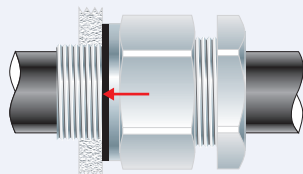


- Screw the inner (2) into the apparatus. Tighten the inner (2) to the installation torque using a CCG Spanner (4).

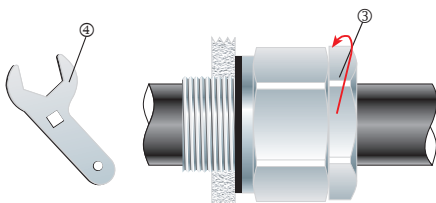
Alternative installation through an unthreaded entry.



If the apparatus is untapped use a locknut.



- Pass the cable end through the gland assembly.



- Tighten the outer nut (3) to the installation torque using a CCG Spanner (4) to produce a seal and grip on the cable. 100% Cable retention load. No additional clamping required.