



Brass

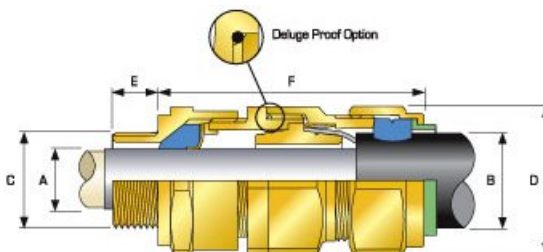
## E2FU Tri-Star Flameproof Ex d, Increased Safety Ex e and Restricted Breathing Ex nR Cable Gland

CMP Type E2FU Tri-Star Triple Certified Flameproof (Type 'd'), Increased Safety (Type 'e') and Restricted Breathing (Type 'nR') indoor and outdoor cable gland for use in Zone 1, Zone 2, Zone 21 and Zone 22 Hazardous Areas with all types of Lead Covered or Lead Sheathed and armoured cable.

All CMP Cable Glands are EMC Tested.

This cable gland provides a Flameproof seal on the cable inner lead covering and in addition the gas tight seal has been tested to prove compatibility with Restricted Breathing equipment. The cable gland allows mechanical cable retention and earth continuity via the cable armour termination, and also earth bonding of the inner Lead Covering or Lead Sheath. Separate tightening actions for the inner Displacement Seal and the Armour Termination afford maximum control over the pressure applied to the cable inner lead covering, and also allows the effectiveness of the gas tight seal to be tested. A detachable universal armour cone and AnyWay clamping ring arrangement facilitates remote make off and enables the cable to be disconnected from the equipment. An environmental / load retention seal is provided on the cable outer sheath.

The CMP E2FU Tri-Star Cable Gland is suitable for use with all forms of equipment protection permitted in Zone 1, Zone 2, Zone 21 & Zone 22 provided always that the prevailing code of practice for selection and installation is observed, e.g. IEC 60079-14.



**Note:** Deluge Proof version available, ferrule colour coded "white" for ease of identification.

**Note:** Stepped Cone is suitable for SWA cables, Grooved Cone is suitable for all other approved armoured cables

# Cable Gland Selection Table

Cable Gland Size	Available Entry Threads "C"			Min Thread Length "E"	Lead Sheath Diameter "A"		Overall Cable Diameter "B"		Armour Range +				Across Flats "D"	Across Corners "D"	Protrusion Length "F"	Ordering Reference (Brass Metric) #	PVC Shroud Ref*	Cable Gland Weight (Kgs)
	Standard		Option		Min	Max	Min	Max	Grooved Cone		Stepped Cone		Max	Max				
	Metric	NPT	NPT						Min	Max	Min	Max						
20S/16	M20	1/2"	3/4"	15.0	3.1	8.6	6.1	13.2	0.0	1.0	0.9	1.0	24.0	25.9	58.5	20S16E2FU1RA	PVC04	0.163
20S	M20	1/2"	3/4"	15.0	6.1	11.6	9.5	15.9	0.0	1.0	0.9	1.25	24.0	25.9	58.5	20SE2FU1RA	PVC04	0.163
20	M20	1/2"	3/4"	15.0	6.5	13.9	12.5	20.9	0.0	1.0	0.9	1.25	30.5	32.9	60.5	20E2FU1RA	PVC06	0.217
25S	M25	3/4"	1"	15.0	11.1	19.9	14.0	22.0	0.0	1.0	1.25	1.6	37.5	40.5	67.5	25SE2FU1RA	PVC09	0.345
25	M25	3/4"	1"	15.0	11.1	19.9	18.2	26.2	0.0	1.0	1.25	1.6	37.5	40.5	67.5	25E2FU1RA	PVC09	0.345
32	M32	1"	1 1/4"	15.0	17.0	26.2	23.7	33.9	0.0	1.0	1.6	2.0	46.0	49.7	69.5	32E2FU1RA	PVC11	0.484
40	M40	1 1/4"	1 1/2"	15.0	22.0	32.1	27.9	40.4	0.0	1.0	1.6	2.0	55.0	59.4	78.0	40E2FU1RA	PVC15	0.700
50S	M50	1 1/2"	2"	15.0	29.5	38.1	35.2	46.7	0.0	1.0	2.0	2.5	60.0	64.8	75.5	50SE2FU1RA	PVC18	0.800
50	M50	2"	2 1/2"	15.0	35.6	44.0	40.4	53.1	0.0	1.0	2.0	2.5	70.0	75.6	80.5	50E1FU1RA	PVC21	0.830
63S	M63	2"	2 1/2"	15.0	40.1	49.9	45.6	59.4	0.0	1.0	2.0	2.5	75.0	81.0	91.5	63SE2FU1RA	PVC23	1.415
63	M63	2 1/2"	3"	15.0	47.2	55.9	54.6	65.9	0.0	1.0	2.0	2.5	80.0	86.4	92.0	63E2FU1RA	PVC25	1.514
75S	M75	2 1/2"	3"	15.0	52.8	61.9	59.0	72.1	0.0	1.0	2.0	2.5	89.0	96.1	99.0	75SE2FU1RA	PVC28	2.199
75	M75	3"	3 1/2"	15.0	59.1	67.9	66.7	78.5	0.0	1.0	2.5	3.0	99.0	106.9	102.0	75E2FU1RA	PVC30	2.770
90	M90	3 1/2"	4"	15.0	66.6	79.9	76.2	90.4	0.0	1.6	3.0	3.5	114.0	123.1	120.0	90E2FU1RA	PVC32	4.350
100	M100	4"	-	15.0	76.0	90.9	86.1	101.5	0.0	1.6	3.15	4.0	123.0	132.8	148.0	100E2FU1RA	LSF33	4.750
115	M115	-	-	15.0	86.0	97.9	101.5	110.3	0.0	1.6	3.15	4.0	133.4	144.1	169.0	115E2FU1RA	LSF34	7.300
130	M130	-	-	15.0	97.0	114.9	114.2	123.3	0.0	1.6	3.15	4.0	146.1	157.8	183.0	130E2FU1RA	LSF35	8.600

Dimensions are displayed in millimetres unless otherwise stated

**NOTE:** \*CMP SOLO LSF Halogen Free Shrouds also available on request. + Alternative armour clamping range available for non-standard armour sizes. # Other thread forms, materials and finishes are available. IEC Ex, ATEX & CSA hazardous area certification marking included as standard. Please consult CMP for any other requirements.

Cable Gland Size	Available Entry Threads "C"			Min Thread Length "E"	Lead Sheath Diameter "A"		Overall Cable Diameter "B"		Armour Range +				Across Flats "D"	Across Corners "D"	Protrusion Length "F"	Ordering Reference (Brass Metric) #	PVC Shroud Ref*	Cable Gland Weight (Ozs)
	Standard		Option		Min	Max	Min	Max	Grooved Cone		Stepped Cone		Max	Max				
	Metric	NPT	NPT						Min	Max	Min	Max						
20S/16	M20	1/2"	3/4"	0.591	0.122	0.339	0.240	0.519	0.000	0.039	0.035	0.039	0.945	1.020	2.303	20S16E2FU1RA	PVC04	5.75
20S	M20	1/2"	3/4"	0.591	0.240	0.457	0.374	0.626	0.000	0.039	0.035	0.049	0.945	1.020	2.303	20SE2FU1RA	PVC04	5.75
20	M20	1/2"	3/4"	0.591	0.256	0.547	0.492	0.823	0.000	0.039	0.035	0.049	1.201	1.295	2.382	20E2FU1RA	PVC06	7.65
25S	M25	3/4"	1"	0.591	0.437	0.783	0.551	0.866	0.000	0.039	0.049	0.063	1.476	1.594	2.657	25SE2FU1RA	PVC09	12.17
25	M25	3/4"	1"	0.591	0.437	0.783	0.717	1.031	0.000	0.039	0.049	0.063	1.476	1.594	2.657	25E2FU1RA	PVC09	12.17
32	M32	1"	1 1/4"	0.591	0.669	1.031	0.933	1.335	0.000	0.039	0.063	0.079	1.811	1.957	2.736	32E2FU1RA	PVC11	17.07
40	M40	1 1/4"	1 1/2"	0.591	0.866	1.264	1.098	1.591	0.000	0.039	0.063	0.079	2.165	2.339	3.071	40E2FU1RA	PVC15	24.69
50S	M50	1 1/2"	2"	0.591	1.161	1.500	1.386	1.839	0.000	0.039	0.079	0.098	2.362	2.551	2.972	50SE2FU1RA	PVC18	28.22
50	M50	2"	2 1/2"	0.591	1.402	1.732	1.591	2.091	0.000	0.039	0.079	0.098	2.756	2.976	3.169	50E1FU1RA	PVC21	29.28
63S	M63	2"	2 1/2"	0.591	1.579	1.965	1.795	2.339	0.000	0.039	0.079	0.098	2.953	3.189	3.602	63SE2FU1RA	PVC23	49.91
63	M63	2 1/2"	3"	0.591	1.858	2.201	2.150	2.594	0.000	0.039	0.079	0.098	3.150	3.402	3.622	63E2FU1RA	PVC25	53.40
75S	M75	2 1/2"	3"	0.591	2.079	2.437	2.323	2.839	0.000	0.039	0.079	0.098	3.504	3.783	3.898	75SE2FU1RA	PVC28	77.57
75	M75	3"	3 1/2"	0.591	2.327	2.673	2.626	3.091	0.000	0.039	0.098	0.118	3.898	4.209	4.016	75E2FU1RA	PVC30	97.71
90	M90	3 1/2"	4"	0.591	2.622	3.146	3.000	3.559	0.000	0.063	0.118	0.138	4.488	4.846	4.724	90E2FU1RA	PVC32	153.44
100	M100	4"	-	0.591	2.992	3.579	3.390	3.996	0.000	0.063	0.124	0.157	4.843	5.228	5.827	100E2FU1RA	LSF33	167.55
115	M115	-	-	0.591	3.386	3.854	3.996	4.343	0.000	0.063	0.124	0.157	5.252	5.673	6.654	115E2FU1RA	LSF34	257.50
130	M130	-	-	0.591	3.819	4.524	4.496	4.854	0.000	0.063	0.124	0.157	5.752	6.213	7.205	130E2FU1RA	LSF35	303.36

Dimensions are displayed in inches unless otherwise stated

**NOTE:** \*CMP SOLO LSF Halogen Free Shrouds also available on request. + Alternative armour clamping range available for non-standard armour sizes. # Other thread forms, materials and finishes are available. IEC Ex, ATEX & CSA hazardous area certification marking included as standard. Please consult CMP for any other requirements.



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CSA Approval Certificate No.	<a href="#">1310517</a>
CSA Code of Protection Category	Ex d IIC; Ex e II
CSA Compliance Standards	CAN/CSA-C22.2 No 0-M91, CAN/CSA-C22.2 No 18-04, CAN/CSA-C22.2 No 25-1966, CAN/CSA-C22.2 No 30-M1986, CAN/CSA-C22.2 No 174-M1984, CAN/CSA-C22.2 No 94-M91, CAN/CSA-E60079-0:07, CAN/CSA-E60079-7:07, CAN/CSA-E60079-1:07
GOST R Certificate Number	<a href="#">POCC GB.HO06.B00207</a>
GOST R Code of Protection Category	Ex d IIC / Ex e II / DIP A21
GOST R Compliance Standards	ГОСТ P 52350.0-2005, ГОСТ P 52350.1-2005, ГОСТ P 52350.7-2005, ГОСТ МЭК 61241-1-1-99
GOST GGTN Permit	<a href="#">PPC 00-40706</a>
GOST K Certificate Number	<a href="#">KZ 75000361 01 01 14761</a>
RoK Permit For Use Number	<a href="#">19-02-UL-1957</a>
INMETRO Approval Certificate No.	<a href="#">MC, AEX-7618-X</a>
INMETRO Code of Protection Category	BR - Ex d IIC / BR - Ex e II / IP66W
INMETRO Compliance Standards	ABNT NBR IEC 60079-0:2006, ABNT NBR IEC 60079-1:2007, IEC 60079-7:2001 e ANBT NBR IEC 60529:2005
NEPSI Certificate Number	<a href="#">GYJ081070</a>
NEPSI Code of Protection Category	Ex d IIC, Ex e II, Ex nR II, DIP A21 TA
NEPSI Compliance Standards	GB3836.1/2/3, GB3836.8-2003, GB12476.1-2000
Lloyds Approval No.	<a href="#">01/00172</a>
DNV Approval No.	<a href="#">E-10496</a>
ABS Approval No.	<a href="#">01-LD234401A/2-PDA</a>
RETIE Approval Number	<a href="#">03866</a>
Type	E2FU Tri-Star
Design Specification	<a href="#">BS 6121:Part 1:1989</a> , <a href="#">EN 50262:1999</a>
ATEX Certification Detail	<a href="#">SIRA06ATEX1097X</a> , <a href="#">SIRA07ATEX4326X</a>
ATEX Code of Protection Category	ATEX II 2 GD, Ex d IIC, Ex e II, Ex tD A21 IP66, ATEX II 3 G Ex nR II
ATEX Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-15, IEC 61241-0, EN 61241-1
IEC Ex Certification Detail	<a href="#">IECEx SIR 06.0043X</a>
IEC Ex Code of Protection Category	Ex d IIC, Ex e II, Ex nR II, Ex tD A21 IP66, Ex d I, Ex e I
IEC Ex Compliance Standards	IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-15, IEC 61241-0, IEC 61241-1
Continuous Operating Temperature	-60°C to +130°C
Ingress Protection Rating	IP66, IP67, IP68 #
Cable Gland Material	Brass, Electroless Nickel Plated Brass, Stainless Steel, Aluminium
Seal Material	CMP SOLO LSF Thermoplastic Elastomer
Cable Type	Lead Sheathed & Single Wire Armour (LC/SWA), Lead Sheathed & Aluminium Wire Armour (LC/AWA), Lead Sheathed & Wire Braid Armour (LC/SWB), Lead Sheathed & Pliable Wire Armour (LC/PWA), Lead Sheathed & Steel Tape Armour (LC/STA), Lead Sheathed & Aluminium Strip Armour (LC/ASA)
Armour Clamping	Reversible Armour Cone & AnyWay Universal Clamping Ring
Sealing Technique	CMP Inner Displacement Seal & Unique CMP "LRS" TM Outer Load Retention Seal
Sealing Area(s)	Cable Inner Lead Covering & Cable Outer Sheath
Accessories	<a href="#">Adaptor/Reducer</a> , <a href="#">Earth Tag</a> , <a href="#">Locknut</a> , <a href="#">Serrated Washer</a> , <a href="#">Entry Thread Seal</a> , <a href="#">Shroud</a>

# IP66 as standard, IP67/IP68 available on request. Deluge Proof when fitted with optional CMP O-ring in the cable gland body joint.

**Note:** Ingress Protection and Deluge Protection are essentially different and should not be confused with each other.

If Tape Armour is to be used please contact CMP for advice.



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