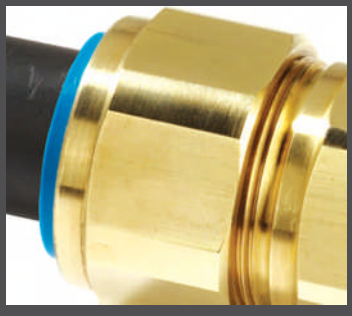
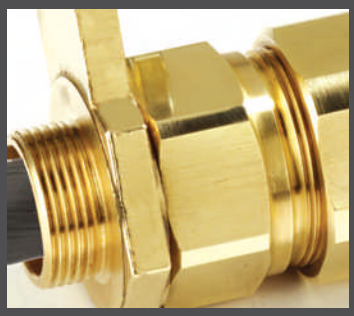
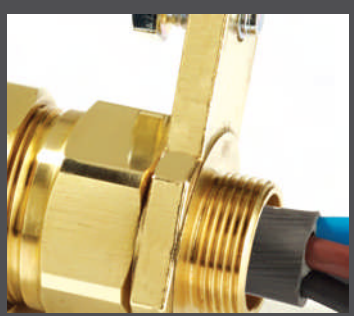
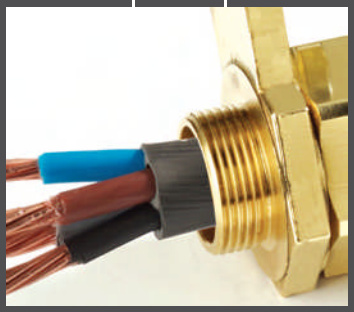
CIEL
CAST INTEGRAL EARTH LUG









APPLICATION

The CMP Cast Integral Earth Lug (CIEL) concept is intended for external earth connections where it is essential to maintain critical earthing under high level short circuit fault conditions. It is designed to meet I.E.E. earthing regulations and because of its unique design, is particularly suitable for MV and HV installations where low resistance earthing is essential.

TESTING

CMP CIEL cable glands have been subjected to independent third party short circuit tests to determine their short circuit fault current ratings resulting in the following :-

Symmetrical Fault Current (kA) for 1 second
26.0 kA for cable gland sizes up to 40
43.0 kA for cable gland sizes 50S and above

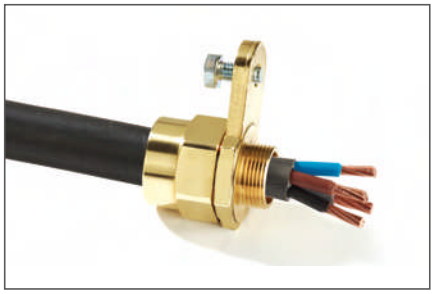
PRODUCTS

The CMP cast integral earth lug (CIEL) option is available in various gland types including BWL-CIEL, CW-CIEL, E1W-CIEL and E2W-CIEL. Other options are available on request including versions for hazardous area installations, such as E1FW-CIEL & E2FW-CIEL.

HOW TO ORDER

Please state cable gland type and size e.g. 25CWC1RA, where the abbreviation letter C is used to identify the product type CIEL.
Refer to specific catalogue page.

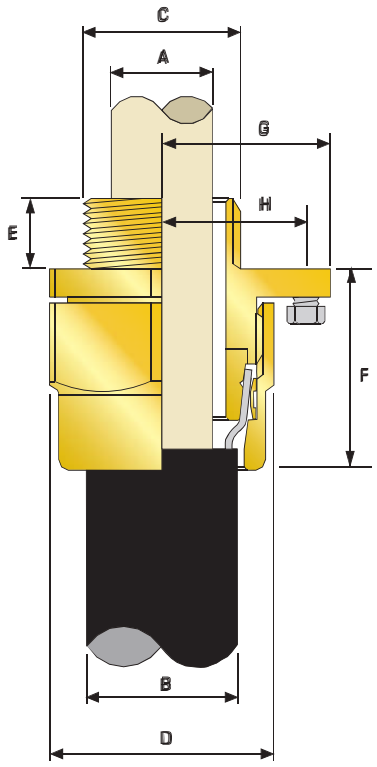
BWL CIEL CABLE GLAND



BWL-CIEL Industrial Cable Gland

Brass indoor gland for use with all types of SWA cable providing mechanical retention and electrical continuity via armourwire termination. Complete with CMP unique Cast Intregral Earth Lug (CIEL) concept. This is particular suitable for H.V, systems where a high level of protection against fault currents is required.

TECHNICAL DATA	
Type	BWL CIEL
Design Specification	BS 6121:2005
EN 50262 Mechanical Classifications	Retention = Class B, Impact = Level 8,
EN 50262 Electrical Classifications	Category C
GOST R Certificate Number	РОСС GB. ГБ05.Н00110
GOST K Certificate Number	KZ7500052.05.01.00063
RoK Permit for Use Number	08-067693
Continuous Operating Temperature	-60°C to +150°C
Ingress Protection Rating	IP2X
Standard Gland Material	Brass
Alternative Gland Material	Electroless Nickel Plated Brass, Stainless Steel, Aluminium
Cable Type	Single Wire Armour (SWA), Aluminium Wire Armour (AWA)
Armour Clamping	Detachable Armour Cone and Anyway Universal Clamping Ring
Optional Accessories	Adaptor/Reducer, Entry Thread Seal, Locknut, Serrated Washer, Shroud

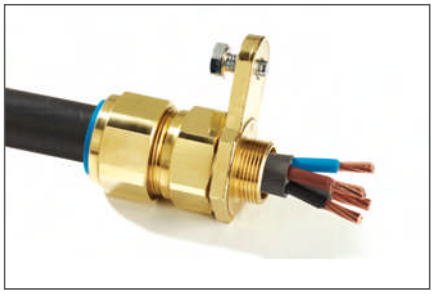


Cable Gland Selection Table

Cable Gland Size	Entry Thread 'C'	Minimum Thread Length 'E'	Cable Bedding Diameter 'A'	Overall Cable Diameter 'B'	Armour Range †		Nominal Across Flats 'D'	Nominal Across Corners 'D'	Nominal Protrusion Length 'F'	Nominal Radius Dimension		CIEL Earth Bolt Size	Earth Fault Current Rating (kA)	Ordering Reference (Brass Metric)	PVC Shroud Reference*	Cable Gland Weight (Kgs)
			Max	Max	Min	Max	Max	Max		'H'	'G'					
20S	M20	10.0	11.7	15.9	0.9	1.25	24.0	26.6	26.0	28.6	38.6	M8	26.0	20SBWLC1RA	PVC04	0.126
20	M20	10.0	14.0	20.9	0.9	1.25	30.5	33.3	34.0	31.8	41.8	M8	26.0	20BWLC1RA	PVC06	0.140
25	M25	10.0	20.0	26.2	1.25	1.6	37.5	40.5	36.0	38.1	50.8	M8	26.0	25BWLC1RA	PVC09	0.220
32	M32	10.0	26.3	33.9	1.6	2.0	46.0	51.0	38.0	41.3	54.0	M10	26.0	32BWLC1RA	PVC11	0.300
40	M40	15.0	32.2	40.4	1.6	2.0	55.0	61.0	40.0	50.8	69.0	M12	26.0	40BWLC1RA	PVC15	0.430
50S	M50	15.0	38.2	46.7	2.0	2.5	60.0	66.5	40.0	57.2	75.0	M12	43.0	50SBWLC1RA	PVC18	0.490
50	M50	15.0	44.1	53.1	2.0	2.5	70.0	78.6	42.0	60.3	80.0	M12	43.0	50BWLC1RA	PVC21	0.460
63S	M63	15.0	50.0	59.4	2.0	2.5	75.0	83.2	48.0	70.0	90.0	M12	43.0	63SBWLC1RA	PVC23	0.900
63	M63	15.0	56.0	65.9	2.0	2.5	80.0	89.0	48.0	70.0	90.0	M12	43.0	63BWLC1RA	PVC25	1.100
75S	M75	15.0	62.0	72.1	2.0	2.5	89.0	101.6	54.0	76.2	97.0	M12	43.0	75SBWLC1RA	PVC28	1.536
75	M75	15.0	68.0	78.5	2.0	2.5	99.0	111.1	54.0	89.0	108.0	M12	43.0	75BWLC1RA	PVC30	1.990
90	M90	15.0	80.0	90.4	3.15	3.15	114.0	128.6	59.0	95.3	112.0	M12	43.0	90BWLC1RA	PVC32	2.942
100	M100	15.0	91.0	101.5	3.15	3.15	123.0	136.0	80.0	95.3	112.0	M12	43.0	100BWLC1RA	150/50HST	3.042
115	M115	15.0	98.0	110.3	3.15	3.15	133.4	147.8	98.0	95.3	112.0	M12	43.0	115BWLC1RA	180/60HST	3.142
130	M130	15.0	115.0	123.3	3.15	3.15	146.1	146.1	110.0	95.3	112.0	M12	43.0	130BWLC1RA	180/60HST	3.242
All dimensions in millimetres																

Note: *LSF Shrouds also available on request. †Alternative armour clamping range available for non-standard armour sizes. Marine approvals including Lloyds, DNV & ABS are also available from CMP Products.

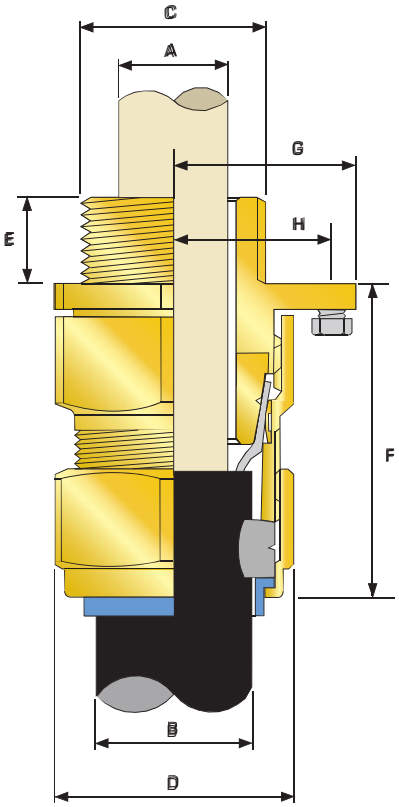
CW CIEL CABLE GLAND



CW-CIEL Industrial Cable Gland

Cable gland for use with all types of SWA cable providing an IP66 environmental seal onto the cable outer sheath. The cable gland being suitable for armoured cables, provides mechanical retention and electrical continuity via armour wire termination. The comes complete with CMP unique Cast Intregral Earth Lug (CIEL) concept. This is particular suitable for H.V, systems where a high level of protection against fault currents is required.

TECHNICAL DATA	
Type	CW CIEL
Design Specification	BS 6121:Part 1:1989, EN 50262
EN 50262 Mechanical Classifications	Retention = Class B, Impact = Level 8,
EN 50262 Electrical Classifications	Category C
GOST R Certificate Number	РОСС GB. ГБ 05.Н00110
GOST K Certificate Number	KZ7500052.05.01.00063
RoK Permit for Use Number	08-067693
Continuous Operating Temperature	-60°C to +150°C
Ingress Protection Rating	IP66
Standard Gland Material	Brass
Alternative Gland Material	Electroless Nickel Plated Brass, Aluminium
Seal Material	CMP Formulated Thermoplastic Elastomer
Cable Type	Single Wire Armour (SWA), Aluminium Wire Armour (AWA)
Armour Clamping	Detachable Armour Cone & AnyWay Universal Clamping Ring
Sealing Technique	Unique CMP "LRS" ™ Outer Seal (Load Retention Seal)
Sealing Area(s)	Cable Outer Sheath
Optional Accessories	Adaptor/Reducer, Entry Thread Seal, Locknut, Serrated Washer, Shroud

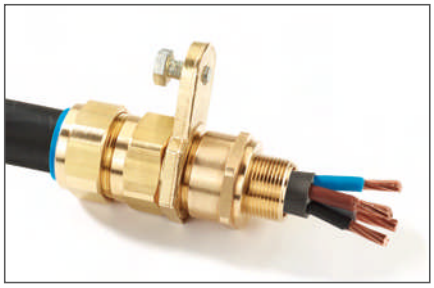


Cable Gland Selection Table

Cable Gland Size	Entry Thread 'C'	Minimum Thread Length 'E'	Cable Bedding Diameter 'A'	Overall Cable Diameter B'		Armour Range †		Nominal Across Flats 'D'	Nominal Across Corners 'D'	Nominal Protrusion Length 'F'	Nominal Radius Dimension		CIEL Earth Bolt Size	Earth Fault Current Rating (kA)	Ordering Reference (Brass Metric)	PVC Shroud Reference*	Cable Gland Weight (Kgs)
			Max	Min	Max	Min	Max	Max	Max		'H'	'G'					
20S	M20	10.0	11.7	9.5	15.9	0.9	1.25	24.0	26.6	58.5	48.0	38.6	M8	26.0	20SCWC1RA	PVC04	0.140
20	M20	10.0	14.0	12.5	20.9	0.9	1.25	30.5	33.3	60.5	55.0	41.8	M8	26.0	20CWC1RA	PVC06	0.180
25S	M25	10.0	20.0	14.0	22.0	1.25	1.6	37.5	40.5	67.5	60.0	-	M8	26.0	25SCWC1RA	PVC09	0.257
25	M25	10.0	20.0	18.2	26.2	1.25	1.6	37.5	40.5	67.5	60.0	50.8	M8	26.0	25CWC1RA	PVC09	0.257
32	M32	10.0	26.3	23.7	33.9	1.6	2.0	46.0	51.0	69.5	60.0	54.0	M10	26.0	32CWC1RA	PVC11	0.376
40	M40	15.0	32.2	27.9	40.4	1.6	2.0	55.0	61.0	78.0	60.0	69.0	M12	26.0	40CWC1RA	PVC15	0.630
50S	M50	15.0	38.2	35.2	46.7	2.0	2.5	60.0	66.5	75.5	62.0	75.0	M12	43.0	50SCWC1RA	PVC18	0.757
50	M50	15.0	44.1	40.4	53.1	2.0	2.5	70.0	78.6	80.5	76.0	80.0	M12	43.0	50CWC1RA	PVC21	0.862
63S	M63	15.0	50.0	45.6	59.4	2.0	2.5	75.0	83.2	91.5	76.0	90.0	M12	43.0	63SCWC1RA	PVC23	1.390
63	M63	15.0	56.0	54.6	65.9	2.0	2.5	80.0	89.0	92.0	86.0	90.0	M12	43.0	63CWC1RA	PVC25	1.360
75S	M75	15.0	62.0	59.0	72.1	2.0	2.5	89.0	101.6	99.0	88.0	97.0	M12	43.0	75SCWC1RA	PVC28	2.307
75	M75	15.0	68.0	66.7	78.5	2.0	2.5	99.0	111.1	102.0	101.0	108.0	M12	43.0	75CWC1RA	PVC30	2.909
90	M90	15.0	80.0	76.2	90.4	3.15	3.15	114.0	128.6	120.0	126.0	112.0	M12	43.0	90CWC1RA	PVC32	3.858
100	M100	15.0	91.0	89.1	101.5	3.15	3.15	123.0	136.0	150.0	126.0	112.0	M12	43.0	100CWC1RA	150/50HST	4.958
115	M115	15.0	98.0	101.3	110.3	3.15	3.15	133.4	147.8	170.0	126.0	112.0	M12	43.0	115CWC1RA	180/60HST	5.058
130	M130	15.0	115.0	114.0	123.3	3.15	3.15	146.1	146.1	180.0	126.0	112.0	M12	43.0	130CWC1RA	180/60HST	6.158
All dimensions in millimetres																	

Note: *LSF Shrouds also available on request. †Alternative armour clamping range available for non-standard armour sizes. Marine approvals including Lloyds, DNV & ABS are also available from CMP Products.

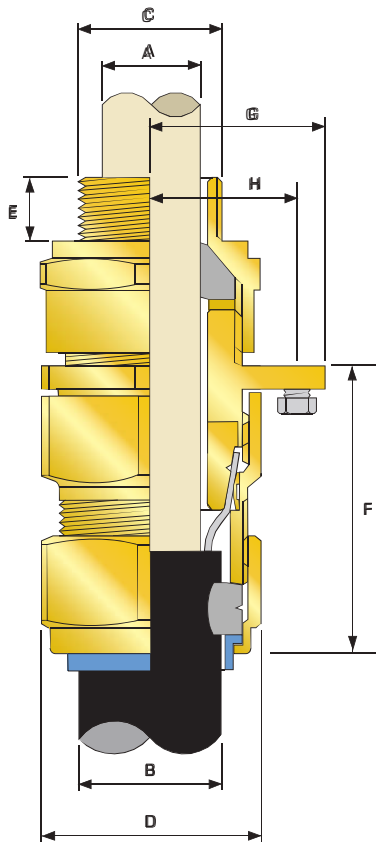
E1W CIEL CABLE GLAND



E1W-CIEL Industrial Cable Gland

Cable gland for use with all types of SWA cable providing an IP66 environmental seal onto the cable Inner bedding and outer cable sheath. The cable gland being suitable for armoured cables, provides mechanical retention and electrical continuity via armour wire termination. The comes complete with CMP unique Cast Intregral Earth Lug (CIEL) concept. This is particular suitable for H.V, systems where a high level of protection against fault currents is required.

TECHNICAL DATA	
Type	E1W CIEL
Design Specification	BS 6121:Part 1:1989, EN 50262:1999
EN 50262 Mechanical Classifications	Retention = Class B, Impact = Level 8,
EN 50262 Electrical Classifications	Category C
GOST R Certificate Number	РОСС GB. ГБ05.Н00110
GOST K Certificate Number	KZ7500052.05.01.00063
RoK Permit for Use Number	08-067693
Continuous Operating Temperature	-60°C to +150°C
Ingress Protection Rating	IP66
Standard Gland Material	Brass
Alternative Gland Material	Electroless Nickel Plated Brass, Aluminium
Seal Material	CMP Formulated Thermoplastic Elastomer
Cable Type	Single Wire Armour (SWA), Aluminium Wire Armour (AWA)
Armour Clamping	Detachable Armour Cone & AnyWay Universal Clamping Ring
Sealing Technique	CMP Inner Displacement Seal & Unique CMP "LRS" ™ Outer Seal (Load Retention Seal)
Sealing Area(s)	Cable Inner Bedding & Cable Outer Sheath
Optional Accessories	Adaptor/Reducer, Entry Thread Seal, Locknut, Serrated Washer, Shroud

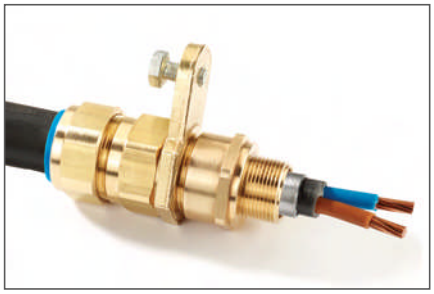


Cable Gland Selection Table

Cable Gland Size	Available Entry Threads 'C'			Minimum Thread Length 'E'	Cable Bedding Diameter 'A'		Overall Cable Diameter 'B'		Armour Range †		Nominal Across Flats 'D'	Nominal Across Corners 'D'	Nominal Protrusion Length 'F'	Nominal Radius Dimension		CIEL Earth Bolt Size	Earth Fault Current Rating (kA)	Ordering Reference (Brass Metric)	PVC Shroud Reference*	Cable Gland Weight (Kgs)
	Standard		Option																	
	Metric	NPT	NPT		Min	Max	Min	Max	Min	Max	Max	Max		'H'	'G'					
20S	M20	1/2"	3/4"	10.0	6.1	11.7	9.5	15.9	0.9	1.25	24.0	26.6	58.5	28.6	38.6	M8	26.0	20SE1WC1RA	PVC04	0.142
20	M20	1/2"	3/4"	10.0	6.5	14.0	12.5	20.9	0.9	1.25	30.5	33.3	60.5	31.8	41.8	M8	26.0	20E1WC1RA	PVC06	0.230
25S	M25	3/4"	1"	10.0	11.1	20.0	14.0	22.0	1.25	1.6	37.5	40.5	67.5	31.8	50.8	M8	26.0	25SE1WC1RA	PVC09	0.328
25	M25	3/4"	1"	10.0	11.1	20.0	18.2	26.2	1.25	1.6	37.5	40.5	67.5	38.1	50.8	M8	26.0	25E1WC1RA	PVC09	0.328
32	M32	1"	1-1/4"	15.0	17.0	26.3	23.7	33.9	1.6	2.0	46.0	51.0	69.5	41.3	54.0	M10	26.0	32E1WC1RA	PVC11	0.470
40	M40	1-1/4"	1-1/2"	15.0	22.0	32.2	27.9	40.4	1.6	2.0	55.0	61.0	78.0	50.8	69.0	M12	26.0	40E1WC1RA	PVC15	0.780
50S	M50	1-1/2"	2"	15.0	29.5	38.2	35.2	46.7	2.0	2.5	60.0	66.5	75.5	57.2	75.0	M12	43.0	50SE1WC1RA	PVC18	0.960
50	M50	2"	2-1/2"	15.0	35.6	44.1	40.4	53.1	2.0	2.5	70.0	78.6	80.5	60.3	80.0	M12	43.0	50E1WC1RA	PVC21	1.150
63S	M63	2"	2-1/2"	15.0	40.1	50.0	45.6	59.4	2.0	2.5	75.0	83.2	91.5	70.0	90.0	M12	43.0	63SE1WC1RA	PVC23	1.700
63	M63	2-1/2"	3"	15.0	47.2	56.0	54.6	65.9	2.0	2.5	80.0	89.0	92.0	69.9	90.0	M12	43.0	63E1WC1RA	PVC25	1.650
75S	M75	2-1/2"	3"	15.0	52.8	62.0	59.0	72.1	2.0	2.5	89.0	101.6	99.0	76.2	97.0	M12	43.0	75SE1WC1RA	PVC28	2.600
75	M75	3"	3-1/2"	15.0	59.1	68.0	66.7	78.5	2.0	2.5	99.0	111.1	102.0	88.9	108.0	M12	43.0	75E1WC1RA	PVC30	3.300
90	M90	3"	3-1/2"	15.0	66.6	80.0	76.2	90.4	3.15	3.15	114.0	128.6	120.0	95.3	112.0	M12	43.0	90E1WC1RA	PVC32	4.850
100	M100	4"	-	15.0	76.0	91.0	89.1	101.5	3.15	4.0	123.0	123.0	138.0	95.3	112.0	M12	43.0	100E1WC1RA	150/50HST	5.950
115	M115	-	-	15.0	86.0	98.0	101.3	110.3	3.15	4.0	133.4	133.4	147.6	95.3	112.0	M12	43.0	115E1WC1RA	180/60HST	6.050
130	M130	-	-	15.0	97.0	115.0	114.0	123.3	3.15	4.0	146.1	146.1	161.9	95.3	112.0	M12	43.0	130E1WC1RA	180/60HST	7.150
All dimensions in millimetres																				

Note: *LSF Shrouds also available on request. †Alternative armour clamping range available for non-standard armour sizes. Marine approvals including Lloyds, DNV & ABS are also available from CMP Products.

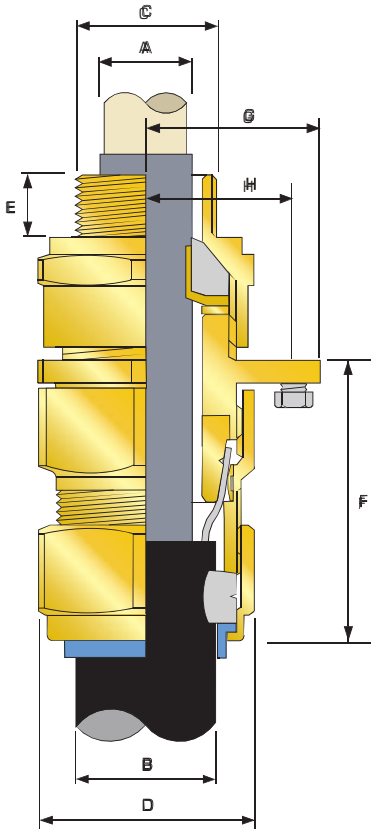
E2W CIEL CABLE GLAND



E2W-CIEL Industrial Cable Gland

Cable gland for use with all types of SWA and lead sheath cables providing an IP66 environmental seal onto the cable lead sheath and cable outer sheath. The cable gland being suitable for armoured cables, provides mechanical retention and electrical continuity between the gland,lead sheath and armour wire termination. The gland comes complete with CMP unique Cast Intregral Earth Lug (CIEL) concept. This is particular suitable for H.V, systems where a high level of protection against fault currents is required.

TECHNICAL DATA	
Type	E2W CIEL
Design Specification	BS 6121:Part 1:1989, EN 50262
EN 50262 Mechanical Classifications	Retention = Class B, Impact = Level 8,
EN 50262 Electrical Classifications	Category C
GOST R Certificate Number	РОСС GB. ГБ05.Н00110
GOST K Certificate Number	KZ7500052.05.01.00063
RoK Permit for Use Number	08-067693
Continuous Operating Temperature	-60°C to +150°C
Ingress Protection Rating	IP66
Standard Gland Material	Brass
Alternative Gland Material	Electroless Nickel Plated Brass, Aluminium
Seal Material	CMP Formulated Thermoplastic Elastomer
Cable Type	Lead Sheathed Single Wire Armour (SWA),Lead Sheathed Aluminium Wire Armour (AWA)
Armour Clamping	Detachable Armour Cone & AnyWay Universal Clamping Ring
Sealing Technique	CMP Inner Displacement Seal & Unique CMP "LRS" ™ Outer Seal (Load Retention Seal)
Sealing Area(s)	Cable Inner Bedding & Cable Outer Sheath
Optional Accessories	Adaptor/Reducer, Entry Thread Seal, Locknut, Serrated Washer, Shroud



Cable Gland Selection Table

Cable Gland Size	Available Entry Threads 'C'			Minimum Thread Length 'E'	Cable Bedding Diameter 'A'		Overall Cable Diameter 'B'		Armour Range †		Nominal Across Flats 'D'	Nominal Across Corners 'D'	Nominal Protrusion Length 'F'	Nominal Radius Dimension		CIEL Earth Bolt Size	Earth Fault Current Rating (kA)	Ordering Reference (Brass Metric)	PVC Shroud Reference*	Cable Gland Weight (Kgs)
	Standard		Option																	
	Metric	NPT	NPT		Min	Max	Min	Max	Min	Max	Max	Max		'H'	'G'					
20S	M20	1/2"	3/4"	10.0	6.1	11.7	9.5	15.9	0.9	1.25	24.0	26.6	58.5	28.6	38.6	M8	26.0	20SE2WC1RA	PVC04	0.142
20	M20	1/2"	3/4"	10.0	6.5	14.0	12.5	20.9	0.9	1.25	30.5	33.3	60.5	31.8	41.8	M8	26.0	20E2WC1RA	PVC06	0.230
25S	M25	3/4"	1"	10.0	11.1	20.0	14.0	22.0	1.25	1.6	37.5	40.5	67.5	31.8	50.8	M8	26.0	25SE2WC1RA	PVC09	0.328
25	M25	3/4"	1"	10.0	11.1	20.0	18.2	26.2	1.25	1.6	37.5	40.5	67.5	38.1	50.8	M8	26.0	25E2WC1RA	PVC09	0.328
32	M32	1"	1-1/4"	15.0	17.0	26.3	23.7	33.9	1.6	2.0	46.0	51.0	69.5	41.3	54.0	M10	26.0	32E2WC1RA	PVC11	0.470
40	M40	1-1/4"	1-1/2"	15.0	22.0	32.2	27.9	40.4	1.6	2.0	55.0	61.0	78.0	50.8	69.0	M12	26.0	40E2WC1RA	PVC15	0.780
50S	M50	1-1/2"	2"	15.0	29.5	38.2	35.2	46.7	2.0	2.5	60.0	66.5	75.5	57.2	75.0	M12	43.0	50SE2WC1RA	PVC18	0.960
50	M50	2"	2-1/2"	15.0	35.6	44.1	40.4	53.1	2.0	2.5	70.0	78.6	80.5	60.3	80.0	M12	43.0	50E2WC1RA	PVC21	1.150
63S	M63	2"	2-1/2"	15.0	40.1	50.0	45.6	59.4	2.0	2.5	75.0	83.2	91.5	70.0	90.0	M12	43.0	63SE2WC1RA	PVC23	1.700
63	M63	2-1/2"	3"	15.0	47.2	56.0	54.6	65.9	2.0	2.5	80.0	89.0	92.0	69.9	90.0	M12	43.0	63F2WC1RA	PVC25	1.650
75S	M75	2-1/2"	3"	15.0	52.8	62.0	59.0	72.1	2.0	2.5	89.0	101.6	99.0	76.2	97.0	M12	43.0	75SE2WC1RA	PVC28	2.600
75	M75	3"	3-1/2"	15.0	59.1	68.0	66.7	78.5	2.0	2.5	99.0	111.1	102.0	88.9	108.0	M12	43.0	75F2WC1RA	PVC30	3.300
90	M90	3"	3-1/2"	15.0	66.6	80.0	76.2	90.4	3.15	3.15	114.0	128.6	120.0	95.3	112.0	M12	43.0	90E2WC1RA	PVC32	4.850
100	M100	4"	-	15.0	76.0	91.0	89.1	101.5	3.15	4.0	123.0	123.0	138.0	95.3	112.0	M12	43.0	100E2WC1RA	150/50HST	5.950
115	M115	-	-	15.0	86.0	98.0	101.3	110.3	3.15	4.0	133.4	133.4	147.6	95.3	112.0	M12	43.0	115E2WC1RA	180/60HST	6.050
130	M130	-	-	15.0	97.0	115.0	114.0	123.3	3.15	4.0	146.1	146.1	161.9	95.3	112.0	M12	43.0	130E2WC1RA	180/60HST	7.150
All dimensions in millimetres																				

Note: *LSF Shrouds also available on request. †Alternative armour clamping range available for non-standard armour sizes. Marine approvals including Lloyds, DNV & ABS are also available from CMP Products.