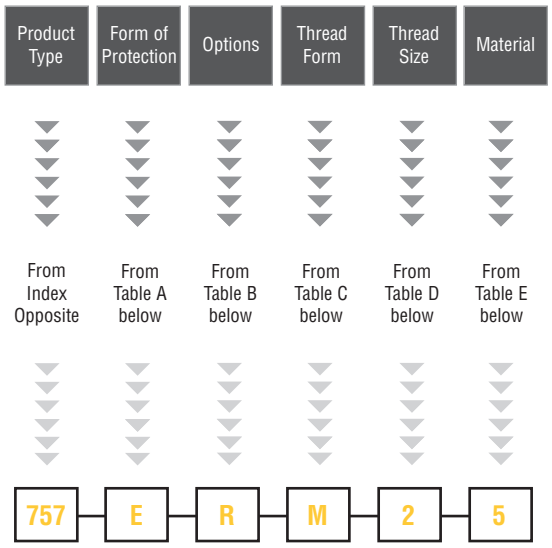
ORDERING DEFINITIONS (HOW TO ORDER)

When selecting and installing certified electrical equipment and components in potentially explosive atmospheres, it is the users responsibility to ensure that the local industry codes of practice are observed and followed, for example EN 60079-14, IEC 60079-14, or NFPA 70 / NEC 500.

KEY TO ORDERING REFERENCES FOR ADAPTORS, REDUCERS & STOPPER PLUGS

HOW TO ORDER - To determine ordering reference please select from the tables below in the following fashion :-
Form of protection - Option (if required) - Thread Form - Thread Size - Material

E - X - A - M - P - L - E



Stopper Plug Options

Description	Allen key recess	Metallic			Non-Metallic	
		Ex 'd'	Ex 'e'	Industrial	Ex 'e'	Industrial
747 Recessed Non-Tamper Proof Type 'A'	✓	✓	✓	✓	✓	✓
747 Recessed Tamper Proof Type 'B'	✓	✓	✓	✓	✓	✓
757 Hexagon Head	✗	✓	✓	✓	✓	✓
757 Hexagon Head c/w 'O' ring seal (*)	✗	✓	✓	✓	✓	✓
767 Dome Head	✓	✓	✓	✓	✓	✓
767 Dome Head c/w 'O' ring seal (*)	✓	✓	✓	✓	✓	✓

Note * This option is available only with parallel thread Stopper Plugs

Table A

Code	Form of Protection
D	Dual Certified Ex 'd' / Ex 'e'
E	Increased Safety Ex 'e'
F	Flameproof Ex 'd'
G	General Purpose Industrial
M	Group 1 Mining (Ex 'd')
U	UL Listed - Hazardous Locations
C	CSA Approved - Ex d / Ex e

Table B

Code	Options
A	Externally Secured - Non Tamper Proof Ex 'd' Stopper Plug (Type A)
B	Internally Secured - Tamper Proof Ex 'd' Stopper Plug (Type B)
R	Optional 'O' ring

Table C

Code	Thread Form
M	Metric
N	NPSM
T	NPT
P	PG
B	BSPP
I	E.T. (Imperial)
S	BSPT

Table D

Code	Thread Size						
	Metric 'M'	NPSM 'N'	NPT 'T'	PG 'P'	BSP 'B'	Imperial 'I'	BSP 'S'
1A	-	-	-	7	-	-	-
1	16	1/2"	1/2"	9	1/2"	5/8"	1/2"
2	20	3/4"	3/4"	11	3/4"	3/4"	3/4"
3	25	1"	1"	13.5	1"	1"	1"
4	32	1-1/4"	1-1/4"	16	1-1/4"	1-1/4"	1-1/4"
5	40	1-1/2"	1-1/2"	21	1-1/2"	1-1/2"	1-1/2"
6	50	2"	2"	29	2"	2"	2"
7	63	2-1/2"	2-1/2"	36	2-1/2"	2-1/2"	2-1/2"
8	75	3"	3"	42	3"	3"	3"
9	90	3 1/2"	3 1/2"	48	3 1/2"	3-1/2"	3 1/2"
10	100	4"	4"	-	4"	4"	4"

Table E

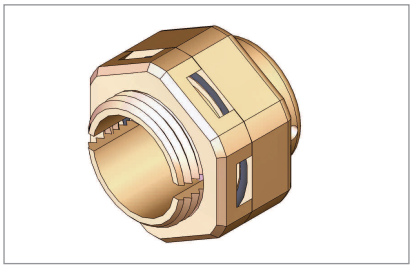
Code	Material
-	Brass
1	Aluminium
2	Nylon
3	Mild Steel
4	Stainless Steel
5	Nickel Plated Brass

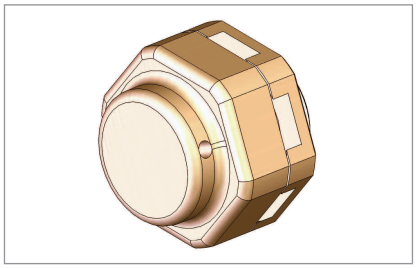
Other variations available on request

Notes: Nominal dimensions shown in this catalogue may vary due to material availability. All dimensions shown are in millimetres unless otherwise stated. Within the parameters of its hazardous area certification CMP products reserves the right to change the design and / or dimensions of any of the products illustrated without notice. For further information please contact CMP Products.

CMP Products Terms & Conditions will apply to all sales orders unless otherwise contractually agreed. These can be obtained form CMP offices or online at **www.cmp-products.com**

781 SERIES
Breather/Drain Plugs





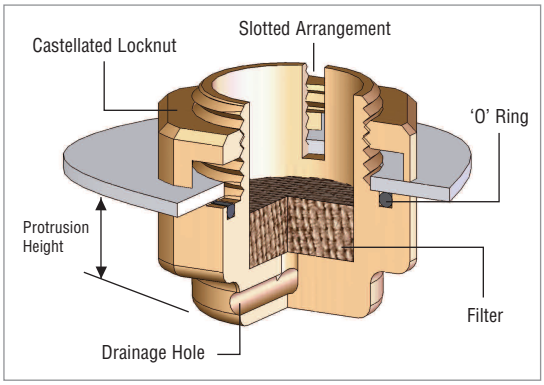
Breather / Drain Plug Type 781 with increased Safety Ex e II form of protection.

The CMP Type 781 Breather / Drain Plug is designed for Increased Safety Ex e apparatus that is susceptible to condensation or prone to moisture collection or ingress during normal operation. The Type 781 is designed to act as both a drainage device, when mounted in a bottom entry of the equipment, and also to enable the inside air to breathe with the external environment under normal ambient and atmospheric conditions, whilst excluding further dust and moisture from penetrating the enclosure. The Type 781 Breather / Drain Plug is supplied complete with an integral entry thread 'O' ring seal, and a castellated locknut to facilitate drainage from inside the enclosure. A General Purpose Industrial version is also available.

Metallic Breather / Drain Plugs are available in Brass, Aluminium or Stainless Steel and can be supplied for both Industrial and Hazardous Area applications, with Ex e Component Approval.

Other thread forms (equivalent to metric sizes M20 and M25 only), including PG, BSPP, NPSM and Imperial (ET) available on request. Please refer to Table D on page 161 for further information on these options.

Technical Data	
Type	**781**
Design Specification	BS 6121: Part 1: 1989.
ATEX Certification Detail	SIRA 01 ATEX 1284U
Code of Protection Category	ATEX Ⓔx II 2 GD Ex e II Component, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC
IECEx Certification Detail	IECEx SIR07.0054U
Code of Protection Category	Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-7, IEC 61241-1
Continous Operating Temperature	-60°C to +200°C
Ingress Protection Rating	IP66 (When fitted in a bottom entry, perpendicular manner)
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel, Nylon
Accessories Included	Integral Entry Thread 'O' Ring Seal, Castellated Locknut



- Filter prevents any dirt or other foreign bodies from entering the enclosure
- Breathing capabilities help to combat the build up of moisture and potential condensation in the apparatus.
- Slotted Entry Threads and Castellated Locknut allows excess water to flow into inverted drain device.
- Draining features enable release of any water that has penetrated the apparatus whilst maintaining the Increased Safety form of protection.
- Integral 'O' Ring ensures an effective seal at the interface between the Breather/Drain device and the equipment.

Product Selection Table *

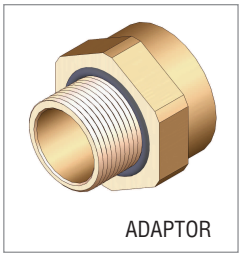
Ordering Reference	Thread Size	Minimum Thread Length	Protrusion Height	Across Flats Dimension	Across Corners Dimensions	Installation Torque (Nm)
781EM2	M20 X 1.5	15	18.0	30.0	33.0	7
781EM3	M25 X 1.5	15	17.0	31.5	35.0	10
781ET1	1/2" NPT	15	18.0	30.0	33.0	7
781ET2	3/4" NPT	15	17.0	31.5	35.0	10
All dimensions shown are in millimetres unless otherwise stated						

Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

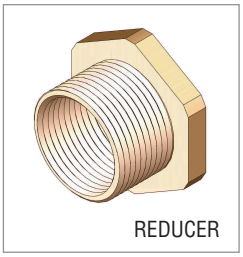
Additional Approvals	
GOST Ex Approval Certificate	РОСС GB.ГБ05.B01367, РОСС GB.ГБ05.B01369
CSA Approval Certificate	1055233 Ex e II, IP66

Note * Please refer to ordering guide tables on page 161 for reference definitions, denoting material variants

737 SERIES
Adaptors & Reducers


ADAPTOR

NYLON ADAPTOR


REDUCER

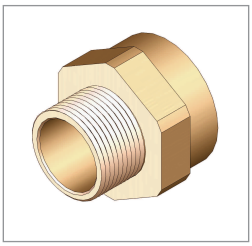
Thread Conversion Adaptor & Reducer Type 737 with Flameproof Ex d IIC & Increased Safety Ex e II forms of protection.

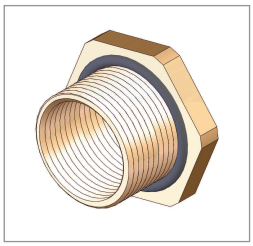
The CMP Type 737 range of Thread Conversion Adaptors & Reducers is designed to provide flexibility and versatility in the execution of construction works when there is a conflict between the type or size of the cable gland thread and the cable entry hole in the equipment. These Thread Conversion Adaptors & Reducers are available with Male to Female connection threads and can be supplied with thread conversion between the forward and rear threads to either an increased or reduced size or a different thread type, e.g. Metric to NPT, or NPT to Metric. Please refer to page 161 for further infromation on the options available. A General Purpose Industrial version is also available.

CMP 737 Thread Conversion Adaptors & Reducers are available in Brass, Aluminium, Stainless Steel or Nylon and can be supplied for both Industrial and Hazardous Area applications, with Ex 'd' & Ex 'e' Component Approval (Nylon Version is Ex e only).

The CMP 737 Adaptor & Reducer range is also optionally available with an integral 'O' Ring seal when the male thread is parallel. A non-metallic version is also available on request to complement non metallic enclosures.

Technical Data	
Type	**737**
Design Specification	BS 6121: Part 1: 189, EN 50262:1999
ATEX Certification Detail	SIRA 01 ATEX 1284U, SIRA 01 ATEX 1003
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II, Component and Equipment, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC ATEX Ⓔx IM 2 Ex d I & Ex e I. ATEX Ⓔx II 2 GD Ex e II only on Nylon version.
IECEx Certification Detail	IECEx SIR07.0052U
Code of Protection Category	Ex d I / Ex e I / Ex d IIC / Ex e II / Ex tD A21 IP6X (Ex e II / Ex tD A21 IP6X for Nylon only)
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC60079-7, IEC 61241-1
Continous Operating Temperature	-60°C to +200°C (Metallic), -20°C to +60°C (Nylon)
Ingress Protection Rating	IP66 or IP68 when fitted with a CMP 'O' Ring or Entry Thread Sealing Washer
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Entry Thread Sealing Washer


CMP 737 Adaptor


CMP 737 Reducer with optional 'O' ring

Key to Ordering References for 737 Adaptors & Reducers

Product Type	Form of Protection	Options	Male Thread Form	Male Thread Size	Female Thread Form	Female Thread Size	Material
From Index on Page 1	From Table A on Page 2	From Table B on Page 2	From Table C on Page 2	From Table D on Page 2	From Table C on Page 2	From Table D on Page 2	From Table E on Page 2
737	D	R	M	3	M	2	4

HOW TO ORDER *
e.g. 737 – D – M – 2 – M – 3 - 4
= Dual Certified Ex d & Ex e – M20 (M) x M25 (F) - Stainless Steel.

Standard Hazardous Area Marking Includes for ATEX certification. When ordering please notify CMP Products in your order if alternative approval markings are required.

Note: When ordering Adaptors & Reducers always state the Male Thread size first.

Note: The 'O' ring detail illustrated is an optional extra.

It should be noted that when using CMP Type 737 Thread Conversion Adaptors and Reducers in association with Explosion Protected electrical equipment the following basic rules must be observed in line with good engineering practice:-

1. No more than one conversion adaptor or reducer should be used at one time on any given cable entry.
2. Stopping plugs should be fitted directly into unused entries of the equipment, and not into an adaptor or reducer.
3. The female connection thread of a Thread Conversion Adaptor shall 'step' not more than one 'size' up in the case of a thread gender change.

Example ; M20 (M) to M25 (F) or M20 (M) to 3/4" NPT (f) is permitted
Where as M20 (M) to M32 (F) or M20 (M) to 1" NPT (F) is not permitted

Additional Approvals	
IEC Approval Certificate	SIRA 05 Y 1089U
GOST Ex Approval Certificate	РОСС GB.ГЕ05.В01367, РОСС GB.ГЕ05.В01369
CSA Approval Certificate	1055233 Class I ABCD, Class II EFG, IP68 TYPE 4X Ex d / Ex e IIC
UL Listing File Reference	EBNV.E214221 Class I ABCD, Class II EFG and Class III

Note * : Please refer to the thread conversion options on page 164 opposite and the ordering guide tables on page 161 for reference definitions. Other Thread Variations available on request. Please refer to page 165 for dimensions of type 737 adaptor and reducer products.

PRODUCT SELECTION TABLE FOR 737 ADAPTORS & REDUCERS

MALE THREAD	FEMALE THREAD																																		
SIZE	M16	M20	M25	M32	M40	M50	M63	M75	5/8" ET	3/4" ET	1" ET	1 1/4" ET	1 1/2" ET	2" ET	2 1/2" ET	3" ET	PG7	PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48	1/2" NPT / NPS	3/4" NPT / NPS	1" NPT / NPS	1 1/4" NPT / NPS	1 1/2" NPT / NPS	2" NPT / NPS	2 1/2" NPT / NPS	3" NPT / NPS	3 1/2" NPT / NPS	4" NPT / NPS	1/2" BSP	3/4" BSP	1" BSP	1 1/4" BSP	1 1/2" BSP	2" BSP	2 1/2" BSP	3" BSP
M16																																											
M20																																											
M25																																											
M32																																											
M40																																											
M50																																											
M63																																											
M75																																											
5/8" ET																																											
3/4" ET																																											
1" ET																																											
1 1/4" ET																																											
1 1/2" ET																																											
2" ET																																											
2 1/2" ET																																											
3" ET																																											
PG7																																											
PG9																																											
PG11																																											
PG13.5																																											
PG16																																											
PG21																																											
PG29																																											
PG36																																											
PG42																																											
PG48																																											
1/2" NPS (M)																																											
3/4" NPS (M)																																											
1" NPS (M)																																											
1 1/4" NPS (M)																																											
1 1/2" NPS (M)																																											
2" NPS (M)																																											
2 1/2" NPS (M)																																											
3" NPS (M)																																											
3 1/2" NPS (M)																																											
4" NPS (M)																																											
1/2" NPT																																											
3/4" NPT																																											
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2 1/2" NPT																																											
3" NPT																																											
3 1/2" NPT																																											
4" NPT																																											
1/2" BSPP																																											
5/8" BSPP																																											
3/4" BSPP																																											
1" BSPP																																											
1 1/4" BSPP																																											
1 1/2" BSPP																																											
2" BSPP																																											
2 1/2" BSPP																																											
3" BSPP																																											

Ex d / Ex e Certified Reducer

Ex d / Ex e Certified Adaptor

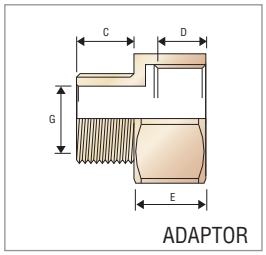
Non-Certified Adaptor

*The Selection Table above indentifies the standard thread options produced and is intended to aid the user in the selection process.
For any requirements not listed above please consult CMP Products. Please also refer to the dimension details on page 165 and the ordering reference definitions on page 161.

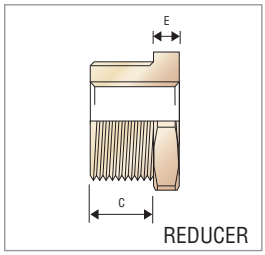
737 SERIES

Adaptors & Reducers

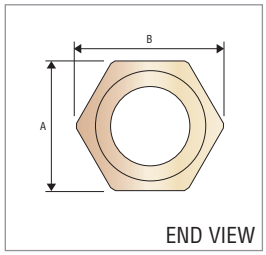
Dimension Data Tables



ADAPTOR



REDUCER



END VIEW

Table A

MALE THREAD SIZE	FEMALE THREAD SIZE																														
	METRIC										NPT & BSPP										PG										
	MI6	M20	M25	M32	M40	M50	M63	M75	M90	M100	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	PG7	PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48
METRIC																															
M16	A01	A01									A14										A01	A01	A01	A01						
M20	R01	A02	A03								A02	A03									R01	R01	A02	A02	A04	A03				
M25	R03	R03	A04	A06							R03	A04	A16								R03	R03	R03	R03	A04	A04				
M32	R05	R05	R05	A06	A08						R05	R05	A17	A08							R05	R05	R07	R05	R05	A07	A35			
M40	R06	R06	R06	R06	A08	A09					R06	R07	R06	A18	A09						R06	R06	R06	R06	R06	R06	A08	A09		
M50	R07	R07	R07	R07	R07	A10	A11				R07	R08	R07	R07	A20	A21					R07	R07	R07	R07	R07	R07	R07	A10	A10	A11
M63	R08	R08	R08	R08	R08	R08	A11	A31			R08	R08	R08	R08	R08	A24	A22				R08	R08	R08	R08	R08	R08	R08	R08	R08	A24
M75	R10	R09	R09	R09	R09	R09	R09	A31	A12		R09	R09	R09	R09	R09	R09	A22	A23			R09	R09	R09	R09	R09	R09	R09	R09	R09	R09
M90	R10	R10	R10	R10	R10	R10	R10	R092	A12	A13	R10	R10	R10	R10	R10	R10	R10	A24	A25	A26	R10	R10	R10	R10	R2	R10	R10	R10	R10	R10
M100	R11	R11	R11	R11	R11	R11	R11	R11	R11	A13	R11	R11	R11	R11	R11	R11	R11	R11	A25	A26	R11	R11	R11	R11	R11	R11	R11	R11	R11	R11
NPT & BSPP																															
1/2"	R01	A27	A03								A02	A03									R01	R01	A27	A27	A27	A04				
3/4"	R03	R03	A04	A16							R03	A04	A16								R03	R03	R03	R03	A04	A04				
1"	R12	R05	R05	A07	A35						R05	R05	A07	A35							R05	R05	R05	R05	R05	A07	A35			
1-1/4"	R13	R12	R12	R12	A18	A28					R12	R12	R12	A35	A09						R12	R12	R12	R12	R12	R12	A18	A28		
1-1/2"	R13	R13	R13	R13	R13	A28	A31				R13	R13	R13	R139	A09	A36					R13	R13	R13	R13	R13	R13	R13	A28	A29	A31
2"	R14	R14	R14	R14	R14	R14	A11	A31			R14	R14	R14	R14	R14	A36	A31				R14	R14	R14	R14	R14	R14	R14	R14	R14	A31
2-1/2"	R15	R15	R15	R15	R15	R15	R15	A32	A33		R15	R15	R15	R15	R15	R15	A32	A37			R15	R15	R15	R15	R15	R15	R15	R15	R15	R15
3"	R16	R16	R16	R16	R16	R16	R16	R16	A33	A34	R16	R16	R16	R16	R16	R16	R16	A25	A38	A39	R16	R16	R16	R16	R16	R16	R16	R16	R16	R16
3-1/2"	R17	R17	R17	R17	R17	R17	R17	R17	R17	A34	R17	R17	R17	R17	R17	R17	R17	R17	A38	A39	R17	R17	R17	R17	R17	R17	R17	R17	R17	R17
4"	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18	A39	R18	R18	R18	R18	R18	R18	R18	R18	R18	R18
PG																															
PG7	A01	A01									A14										A02	A02	A01	A01						
PG9	A01	A01									A14										A02	A02	A01	A01						
PG11	A02	A02	A03								A02	A03									A02	A02	A02	A02	A02					
PG13.5	A02	A02	A03								A02	A03									R01	R01	A02	A02	A03	A03				
PG16	R03	A27	A04	A06							A03	A03	A16								R02	R02	R02	A03	A03	A40				
PG21	R04	R04	A05	A06	A08						R04	A15	A16								R04	R04	R04	R04	R04	A05	A10			
PG29	R06	R06	R06	R06	A08	A09					R06	R06	A18	A18	A19						R06	R06	R06	R06	R06	R06	A08	A09		
PG36	R07	R07	R07	R07	R07	A28	A11				R07	R07	R07	A19	A19						R07	R07	R07	R07	R07	R07	R07	A09	A10	A11
PG42	R07	R07	R07	R08	R08	A10	A24				R07	R07	R07	R07	R07	A21					R07	R07	R07	R07	R07	R07	R07	R07	A10	A11
PG48	R08	R14	R14	R08	R14	R14	A11	A31			R08	R08	R08	R08	R08	A21	A22				R08	R08	R08	R08	R08	R08	R08	R08	R08	A11

Table B

737 ADAPTOR DETAIL	A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20
Across Flats Dimension 'A'	24.0	24.0	30.0	30.0	33.0	36.0	36.0	46.0	55.0	60.0	70.0	100.0	110.0	24.0	46.0	41.0	41.0	46.0	55.0	55.0
Across Corners Diameter 'B'	26.6	26.6	33.3	33.3	36.6	40.0	40.0	51.0	61.0	66.5	77.6	110.0	122.0	26.6	51.0	43.5	46.0	51.0	61.0	61.0
Male Thread Length 'C'	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	19.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Female Thread Length 'D'	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	21.0	16.0	20.0	20.0	16.0	16.0	16.0	16.0	16.0	15.0	16.0
Protrusion Length 'F'	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	20.0	24.0	24.0	20.0	20.0	20.0	20.0	20.0	27.0	20.0
Nominal Bore 'G'	8.0	13.5	13.5	19.0	20.0	20.0	26.0	29.0	32.0	42.0	42.0	65.0	79.3	9.7	20.0	20.0	26.0	32.0	29.0	42.0
737 ADAPTOR DETAIL	**A21**	**A22**	**A23**	**A24**	**A25**	**A26**	**A27**	**A28**	**A29**	**A30**	**A31**	**A32**	**A33**	**A34**	**A35**	**A36**	**A37**	**A38**	**A39**	**A40**
Across Flats Dimension 'A'	65.0	80.0	95.0	70.0	95.0	123.0	27.0	55.0	60.0	70.0	80.0	80.0	100.0	114.0	46.0	65.0	95.0	110.0	127.0	36.0
Across Corners Diameter 'B'	72.0	89.0	105.0	80.0	105.0	138.0	30.0	6.0	66.5	77.6	89.0	89.0	110.0	132.0	51.0	72.0	105.0	122.0	146.0	40.0
Male Thread Length 'C'	15.0	15.0	15.0	15.0	25.0	25.0	15.0	16.0	25.0	16.0	16.0	23.0	5.0	36.0	16.0	16.0	23.0	25.0	36.0	15.0
Female Thread Length 'D'	16.0	23.0	25.0	16.0	25.0	25.0	16.0	16.0	17.0	16.0	16.0	16.0	20.0	22.0	16.0	16.0	25.0	27.0	36.0	16.0
Protrusion Length 'F'	20.0	27.0	30.0	20.0	30.0	35.0	20.0	20.0	20.0	20.0	20.0	20.0	24.0	38.0	20.0	20.0	30.0	32.0	39.0	20.0
Nominal Bore 'G'	42.0	55.0	65.0	55.0	75.0	80.0	14.0	38.0	38.0	38.0	49.0	60.0	75.0	75.0	26.3	38.0	60.0	75.0	75.0	14.0
737 REDUCER DETAIL	**R01**	**R02**	**R03**	**R04**	**R05**	**R06**	**R07**	**R08**	**R09**	**R10**	**R11**	**R12**	**R13**	**R14**	**R15**	**R16**	**R17**	**R18**	**-**	**-**
Across Flats Dimension 'A'	24.0	27.0	30.0	33.0	36.0	46.0	55.0	70.0	80.0	95.0	110.0	46.0	50.0	65.0	80.0	95.0	110.0	123.0	-	-
Across Corners Diameter 'B'	26.6	30.0	33.3	36.6	40.0	51.0	61.0	77.6	89.0	105.0	122.0	51.0	55.4	72.1	88.6	105.0	122.0	138.0	-	-
Male Thread Length 'C'	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	19.0	16.0	16.0	16.0	23.0	25.0	25.0	29.0	-	-
Female Thread Length 'E'	20.0	20.0	20.0	20.0	20.0	20.0	21.0	21.0	25.0	25.0	29.0	22.0	22.0	22.0	29.0	35.0	35.0	39.0	-	-
Protrusion Length 'F'	5.0	5.0	5.0	5.0	5.0	5.0	6.0	6.0	10.0	10.0	10.0	6.0	6.0	6.0	6.0	10.0	10.0	10.0	-	-

To obtain CMP 737 Adaptor & Reducer nominal dimensions, follow the steps below:-

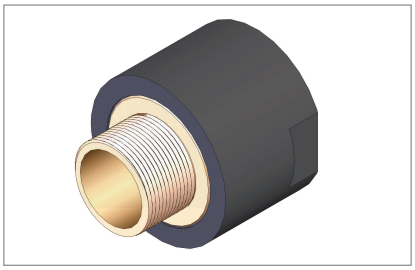
Step 1 - Select male thread by consulting the left hand column of table 'A'

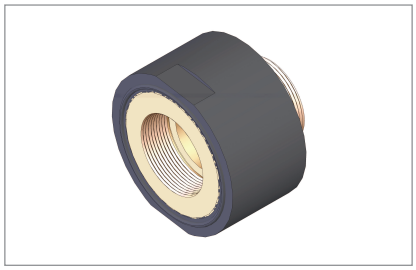
Step 2 - Select the female thread size by consulting column headings at the top of table 'A', and by cross referencing this with the selection in step 1, identify the key reference number prefixed 'A' for Adaptor and 'R' for reducer.

Step 3 - Using this key reference number, please refer to the corresponding dimensions in Table 'B'.

Please note that the data in tables 'A' and 'B' above include Adaptors and Reducers which are certified for use in Hazardous Areas. Dimension data for other Industrial versions is available from CMP Products on request.

777 SERIES
Insulated Adaptors



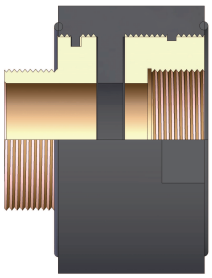


Insulated Adaptor Type 777 with Flameproof Ex d IIC & Increased Safety Ex e II forms of protection.

The CMP Type 777 Insulated Adaptor allows the Metallic Cable Gland, and ultimately the cable armour, to be effectively isolated from the equipment. The use of these Adaptors has proven to be an essential precaution in areas where electromagnetic 'noise' and circulating eddy currents 'stray' around any vulnerable cable system. Particularly relevant in Power Plants and in areas where highly sensitive instrumentation circuits are relied upon for interference free safety critical operations, the cable armour can still be connected to ground externally with the use of an earth tag fitted between the cable gland and insulated adaptor. This allows the user to design his system around a single point earthing strategy and allows the operator to perform tests on the earth circuit without disconnection of the elements installed. A General Purpose Industrial version is also available.

CMP 777 Insulated Adaptors are available in Brass, Aluminium or Stainless Steel and can be supplied for both Industrial and Hazardous Area applications, with Ex 'd' & Ex 'e' Component Approval.

777 Insulated Adaptor



Technical Data

Type	**777**
Design Specification	BS 6121: Part 1: 1989, EN 50262:1999
ATEX Certification Detail	SIRA 05 ATEX 1233U
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC
IECEx Certification Detail	IECEx SIR 05.0044U
Code of Protection Category	Ex d IIC / Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-0, IEC 61241-1
Continuous Operating Temperatures	-20ºC to + 60ºC
Ingress Protection Rating	IP68
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel
Accessories Included	Integral Entry Thread 'O' Ring Seal
Optional Accessories	Locknut, Serrated Washer

Product Selection Table *

Ordering Reference	Male Thread Size	Minimum Thread Length	Female Thread Size	Maximum Bore Diameter	Nominal Protrusion Length	Overall Envelope Diameter
777DM2M2	M20 X 1.5	15	M20 X 1.5	14.3	36.1	40.0
777DM3M3	M25 X 1.5	15	M25 X 1.5	20.3	40.5	57.0
777DM4M4	M32 X 1.5	15	M32 X 1.5	26.8	40.6	57.0
777DM5M5	M40 X 1.5	15	M40 X 1.5	32.7	40.9	76.0
777DM6M6	M50 X 1.5	15	M50 X 1.5	44.6	41.2	76.0
777DM7M7	M63 X 1.5	15	M63 X 1.5	56.5	57.2	100.0
777DM8M8	M75 X 1.5	15	M75 X 1.5	65.2	57.2	100.0
All dimensions shown are in millimetres unless otherwise stated						

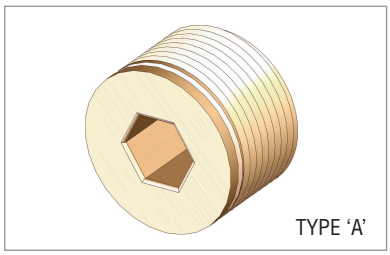
Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

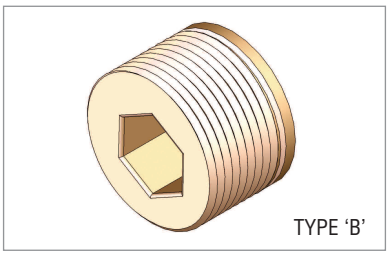
Additional Approvals

GOST R Certificate Number	РОСС GB.ГБ05.B01912
CSA Approval Certificate	1055233 Class I ABCD, Class II EFG, IP68 TYPE 4X Exd / Ex e IIC

Note* : Other Thread Variations available on request. Please refer to ordering guide tables on page 161 for reference definitions

747 SERIES
Stopper Plugs





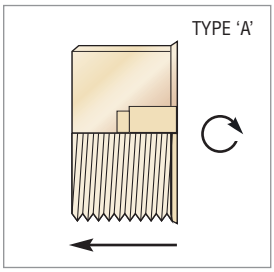
Stopper Plug Type 747 with Flameproof Ex d IIC form of protection, with and without Tamper-proof facility.

The CMP Type 747 range of Flameproof Ex d Stopper Plugs is designed to provide a permanent or temporary means of blanking unused cable entry holes in Flameproof enclosures enabling the equipment to be safely deployed in the hazardous area. A General Purpose Industrial version is also available.

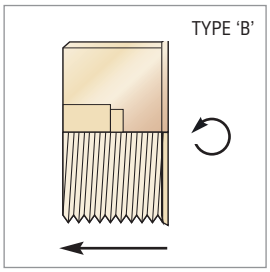
Always inserted from the outside of the enclosure, these Stopper Plugs are available with both external (Type A) and internal (Type B) Allen Key facility. The 747 Type B Stopper Plug is considered as tamper-proof since it can only be removed from the inside, after the equipment has been de-energised and the terminal chamber cover removed.

CMP Type 747 Stopper Plugs are available in Brass, Aluminium, Stainless Steel or Nylon (Exe) and can be supplied for both Industrial and Hazardous Area applications, with a variety of thread forms and sizes, including NPT. Please refer to Table 'D' on page 161 for further information on these options.

Technical Data	
Type	**747 (Type A & Type B)**
Design Specification	BS 6121: Part 1: 1989, EN 50262:1999
ATEX Certification Detail	SIRA 01 ATEX 1284U, SIRA 02 ATEX 1003X
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component & Equipment, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC ATEX Ⓔx IM 2 Ex d I & Ex e I
IECEx Certification Detail	IECEx SIR07.0056U
Code of Protection Category	Ex d I / Ex e I / Ex d IIC / Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Continous Operating Temperatures	-60ºC to + 200ºC (-20ºC to +60ºC Nylon version)
Ingress Protection Rating	IP66
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel, Nylon



Ex 'd' Recessed Stopper Plug Type 'A'



Ex 'd' Recessed Stopper Plug Type 'B'

HOW TO ORDER *
e.g. 747 – F – A – M – M – 3 - 1
= Ex d - Type A - M25 - Aluminium

Note: For Tamper Proof Type B Stopper Plugs please substitute the letter A with the letter B in the Ordering Reference list opposite.

Standard Product Selection Table *

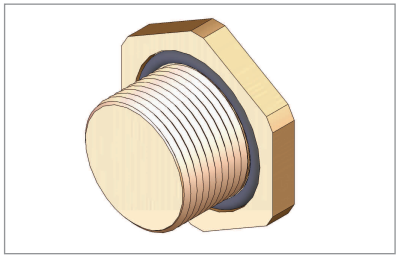
Ordering Reference	Thread Size	Minimum Thread Length	Allen Key Size A/F
747-F-A-M-1	M16 X 1.5	15	M8
747-F-A-M-2	M20 X 1.5	15	M10
747-F-A-M-3	M25 X 1.5	15	M10
747-F-A-M-4	M32 X 1.5	15	M10
747-F-A-M-5	M40 X 1.5	15	M10
747-F-A-M-6	M50 X 1.5	15	M10
747-F-A-M-7	M63 X 1.5	15	M14
747-F-A-M-8	M75 X 1.5	15	M14
747-F-A-M-9	M90 X 2	15	M14
747-F-A-M-10	M100 X 2	15	M14
All dimensions shown are in millimetres unless otherwise stated			

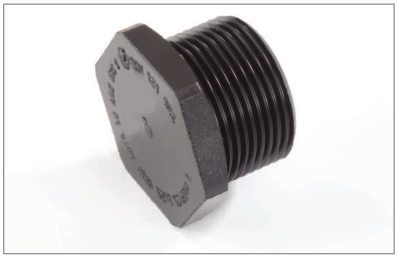
Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

Additional Approvals	
Gost Ex Approval Certificate	РОСС GB.ГБ05.B01367, РОСС GB.ГБ05.B01369
CSA Approval Certificate	1055233 Class I ABCD, Class II EFG, IP68 TYPE 4X Ex d IIC
UL Listing file reference	EBNV.E214221 Class I ABCD, Class II EFG, & Class III

Note*: Other Thread Variations available on request. Please refer to ordering guide tables on page 161 for reference definitions

757 SERIES
Stopper Plugs





Stopper Plug Type 757 with Flameproof Ex d IIC & Increased Safety Ex e II forms of protection

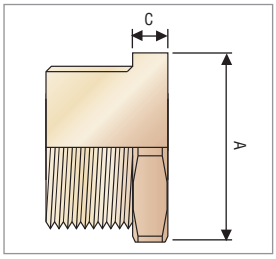
The CMP Type 757 range of Stopper Plugs is designed to provide a permanent or temporary means of blanking unused cable entry holes in Flameproof and Increased Safety enclosures, enabling the equipment to be safely deployed in the hazardous area. The 757 range of Stopper Plugs is produced with a Hexagon Head, making it possible to install or remove with either an open ended or ring type spanner or wrench.

A General Purpose Industrial version is also available.

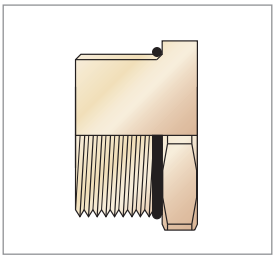
The CMP Type 757 Stopper Plug design allows for the addition of an entry thread sealing washer, which is available as an optional extra. Alternatively, this is also available with an optional Integral Entry Thread 'O' Ring seal.

CMP Type 757 Stopper Plugs are available in Brass, Aluminium, Stainless Steel or Nylon (Ex e), and can be supplied for both Industrial and Hazardous Area applications, in a variety of thread forms and sizes. Please refer to table 'D' on page 161 for further information on these options.

Technical Data	
Type	**757**
Design Specification	BS 6121: Part 1: 1989, EN 50262:1999
ATEX Certification Detail	SIRA 01 ATEX 1284U, SIRA 02 ATEX 1003X
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component & Equipment, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC ATEX Ⓔx IM 2 Ex d I & Ex e I
IECEx Certification Detail	IECEx SIR07.0056U
Code of Protection Category	Ex d I / Ex e I / Ex d IIC / Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Continous Operating Temperatures	-60ºC to + 200ºC (Metallic), -20ºC to +60ºC (Nylon)
Ingress Protection Rating	IP66 or IP68 when fitted with a CMP 'O' Ring or Entry Thread Sealing Washer
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Entry Thread Sealing Washer
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel, Nylon.



757 Series Stopper Plug

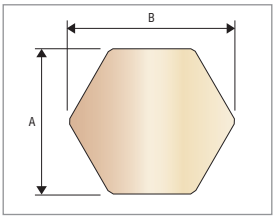


757 Series Stopper Plug with optional 'O' ring

HOW TO ORDER *

e.g. 757 – E – M – 2 - 5
= Ex E - M20 - Nickel Plated Brass

Note: For Integral Entry Thread 'O' Ring Seal option please add the letter 'R' after the form of protection in the Ordering Reference list opposite, e.g 757-D-R-M-3



Stopper Plug end view

Product Selection Table *

Ordering Reference	Thread Size	Minimum Thread Length	Across Flats 'A'	Across Corners Diameter 'B'	Protrusion Length 'C'
757-D-M-1	M16 X 1.5	15	24.0	26.0	5.0
757-D-M-2	M20 X 1.5	15	24.0	26.0	5.0
757-D-M-3	M25 X 1.5	15	30.0	33.0	5.0
757-D-M-4	M32 X 1.5	15	36.0	40.0	5.0
757-D-M-5	M40 X 1.5	15	46.0	51.0	6.0
757-D-M-6	M50 X 1.5	15	55.0	61.0	6.0
757-D-M-7	M63 X 1.5	15	70.0	78.0	6.0
757-D-M-8	M75 X 1.5	15	80.0	89.0	6.0
757-D-M-9	M90 X 2	15	95.0	106.0	6.0
757-D-M-10	M100 X 2	15	110.0	123.0	6.0

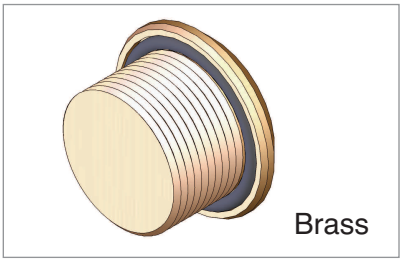
All dimensions shown are in millimetres unless otherwise stated

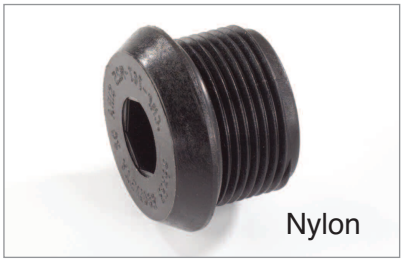
Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

Additional Approvals	
Gost Ex Approval Certificate	РОСС GB.ГЕ05.B01367, РОСС GB.ГЕ05.B01369
CSA Approval Certificate	1055233 Ex e II, IP68, Type 4X
UL Listing file reference	EBNV.E214221 Class I ABCD, Class II EFG & Class III

Note * : Other Thread Variations available on request. Please refer to ordering guide tables on page 161 for reference definitions

767 SERIES
Stopper Plugs


Brass


Nylon

Stopper Plug Type 767 with Flameproof Ex d I, Ex d IIC & Increased Safety Ex e I, Ex e II forms of protection

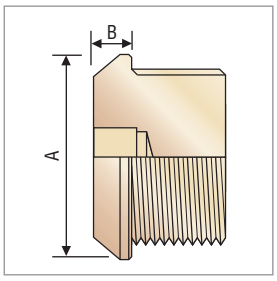
The CMP Type 767 range of Stopper Plugs is designed to provide a permanent or temporary means of blanking unused cable entry holes in Flameproof and Increased Safety enclosures, enabling the equipment to be safely deployed in the hazardous area. The 767 range of Stopper Plugs is produced with a Dome Head as standard, and is equipped with an Allen Key recess making it impossible to remove with a standard spanner or wrench.

A General Purpose Industrial version is also available.

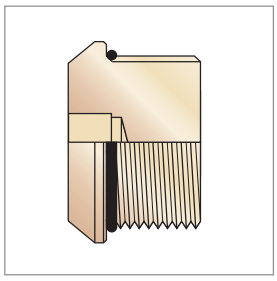
The CMP Type 767 Stopper Plug design allows for the addition of an entry thread sealing washer, which is available as an optional extra. Alternatively, this is also available with an optional Integral Entry Thread 'O' Ring seal.

CMP Type 767 Stopper Plugs are available in Brass, Aluminium, Stainless Steel or Nylon (Ex e), can be supplied for both Industrial and Hazardous Area applications, and can be supplied in a variety of thread forms and sizes. Please refer to Table 'D' on page 161 for further information on these options.

Technical Data	
Type	**767**
Design Specification	BS 6121: Part 1: 1989, EN 50262:1999
ATEX Certification Detail	SIRA 01 ATEX 1284U, SIRA 01 ATEX 1003
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component & Equipment, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC ATEX Ⓔx I M2 Ex d I & Ex e I
IECEx Certification Detail	IECEx SIR07.0056U
Code of Protection Category	Ex d I / Ex e I / Ex d IIC / Ex e II / Ex tD A21 IP66
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Continous Operating Temperatures	-60°C to + 200°C (Metallic), -20°C to +60°C (Nylon)
Ingress Protection Rating	IP66 or IP68 when fitted with a CMP 'O' Ring or Entry Thread Sealing Washer
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Entry Thread Sealing Washer
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel, Nylon.



767 Series Stopper Plug


767 Series Stopper Plug with optional 'O' ring

HOW TO ORDER *
e.g. 767 – D – M – 2 - 4
= Dual Certified Ex d & Ex e - M20 - Stainless Steel

Note: For Integral Entry Thread 'O' Ring Seal option please use the letter 'R' after the form of protection in the Ordering Reference list opposite.

Product Selection Table *

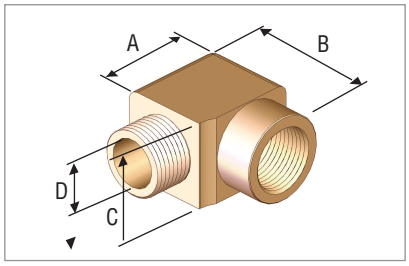
Ordering Reference	Thread Size	Minimum Thread Length	Head Diameter 'A'	Protrusion Length 'B'	Allen Key Size A/F
767-D-M-1	M16 X 1.5	15	23.0	5.0	M8
767-D-M-2	M20 X 1.5	15	27.0	5.0	M10
767-D-M-3	M25 X 1.5	15	30.0	5.0	M10
767-D-M-4	M32 X 1.5	15	36.0	5.0	M10
767-D-M-5	M40 X 1.5	15	46.0	5.0	M10
767-D-M-6	M50 X 1.5	15	56.0	5.0	M10
767-D-M-7	M63 X 1.5	15	70.0	5.0	M14
767-D-M-8	M75 X 1.5	15	80.0	5.0	M14
767-D-M-9	M90 X 2	15	95.0	5.0	M14
767-D-M-10	M100 X 2	15	110.0	5.0	M14
All dimensions shown are in millimetres unless otherwise stated					

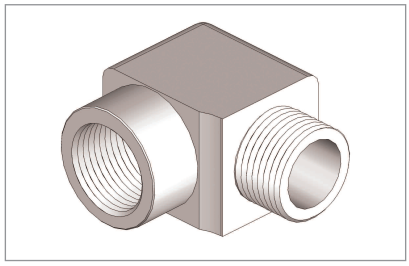
Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

Additional Approvals	
Gost Ex Approval Certificate	РОСС GB.ГБ05.B01367, РОСС GB.ГБ05.B01369
CSA Approval Certificate	1055233 Class I ABCD, IP68, TYPE 4X Ex d / Ex e IIC
UL Listing file reference	EBNV.E214221 Class I ABCD, Class II EFG, & Class III

Note * : Other Thread Variations available on request. Please refer to ordering guide tables on page 161 for reference definitions

787 SERIES
90º Adaptors





Right Angled Adaptor Type 787 with Flameproof Ex d IIC & Increased Safety Ex e II forms of protection

The CMP Type 787 Right Angled Adaptor is designed to protect cables when installed in confined spaces where the cable may otherwise be subject to excessive bending stress, and offers a means of connection where the cable cannot be installed in the usual perpendicular fashion. A General Purpose Industrial version is also available.

These Right Angled Adaptors are available with Male or Female connection threads and can also be supplied with thread conversion between the forward and rear threads to either a reduced size or a different thread type, e.g. Metric to NPT, or NPT to Metric. Please refer to Table 'D' on page 161 for further information on these options.

The CMP Type 787 Right Angled Adaptors are available in Brass, Aluminium or Stainless Steel and can be supplied for both Industrial and Hazardous Area applications, with Ex d & Ex e Component Approval.

TECHNICAL DATA	
Type	**787**
Design Specification	BS 6121: Part 1: 1989, EN 50262:1999
ATEX Certification Detail	SIRA 01 ATEX 1284U
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC ATEX Ⓔx IM 2 Ex d I & Ex e I
IECEx Certification Detail	IECEx SIR07.0055U
Code of Protection Category	Ex d I / Ex e I / Ex d IIC / Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Continous Operating Temperatures	-60ºC to + 200ºC
Ingress Protection Rating	IP66 or IP68 when fitted with a CMP 'O' Ring or Entry Thread Sealing Washer
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Entry Thread Sealing Washer

Product Selection Table *

Ordering Reference	Male Forward Thread	Minimum Thread Length	Bore Diameter 'D'	Female Rear Thread Size	Protrusion Length 'A'		Width 'B'	Installation Torque (Nm)
					Male to Female Version	Female to Male Version		
787DM2M2	M20 X 1.5	15	14.3	M20 X 1.5	31.0	37.0	43.0	7
787DM3M3	M25 X 1.5	15	20.3	M25 X 1.5	41.0	67.0	45.0	10
787DM4M4	M32 X 1.5	15	26.8	M32 X 1.5	49.0	69.0	52.0	15
787DM5M5	M40 X 1.5	15	32.7	M40 X 1.5	62.0	74.0	65.0	25
787DM6M6	M50 X 1.5	15	44.6	M50 X 1.5	82.0	96.0	60.0	30
787DM7M7	M63 X 1.5	15	48.0	M63 X 1.5	90.0	102.0	84.0	45
787DM8M8	M75 X 1.5	15	61.0	M75 X 1.5	95.0	108.0	95.0	45
787DM9M9	M90 X 1.5	15	73.0	M90 X 1.5	96.0	110.0	111.0	45
787DM10M10	M100 X 1.5	15	88.0	M100 X 1.5	100.0	120.0	125.0	45

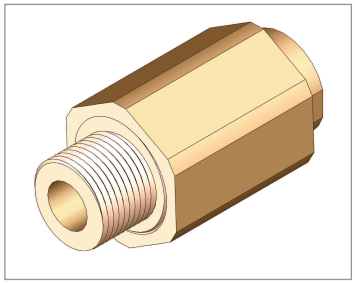
All dimensions shown are in millimetres unless otherwise stated

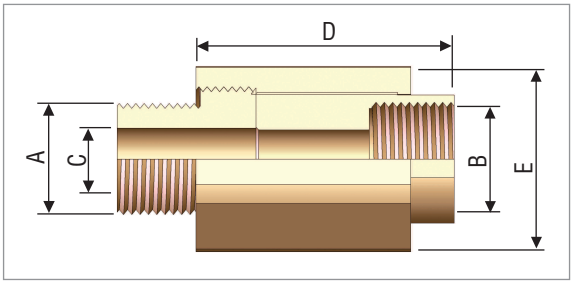
Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

Additional Approvals	
IEC Approval Certificate	SIRA 05 Y 1089U
Gost Ex Approval Certificate	РОСС GB.ГБ05.B01367, РОСС GB.ГБ05.B01369
CSA Approval Certificate	1055233 Class I ABCD, Class II EFG, IP68, TYPE 4X Ex d / Ex e IIC

Note: Versions with Male Parallel forward threads are, as an option, also available with an integral 'O' Ring Seal. For such options please add the suffix letter 'R' after the type number (787) in the ordering reference above, e.g 787RDM2M2.

780 SERIES
Unions





Union Type 780 with Flameproof Ex d IIC & Increased Safety Ex e II forms of protection.

The CMP Type 780 Metallic Union is designed to allow connection of rigid and flexible conduit, or terminated cable glands, to any fixed equipment. The 780 Union provides a running connection by means of an integral coupling arrangement that eliminates the need to rotate the conduit, or cable, or equipment to achieve a correct termination. The ease of installation offered by the 780 Union consequently makes the process of removing the conduit or other terminated cable entry device from the equipment a simple, fast and effective one.

Available in Brass, Aluminium or Steenless Steel these Unions are approved for use in conjunction with Ex d and Ex e certified equipment and cable entry devices, and can also be supplied with thread conversion between the forward and rear threads to either a reduced size or a variety of different thread types, e.g. Metric to NPT, or NPT to Metric. Please refer to Table D on page 161 for further information on these options.

A General Purpose Industrial version is also available.

Technical Data	
Type	**780**
Design Specification	BS 6121: Part 1: 1989
ATEX Certification Detail	SIRA 01 ATEX 1284U
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component, Zone 1, Zone 2, Zone21, & Zone 22 - Gas Groups IIA, IIB, IIC
IECEx Certification Detail	IECEx SIR07.0051U
Code of Protection Category	Ex d IIC / Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Continous Operating Temperature	-60°C to +200°C
Ingress Protection Rating	IP66 or IP68 when fitted with a CMP 'O' Ring or Entry Thread Sealing Washer
Materials	Brass, Nickel, Plated Brass, Aluminium, Stainless Steel
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Entry Thread Sealing Washer

Product Selection Table *

Ordering Reference	Male Forward Thread Size 'A'	Minimum Thread Length	Female Rear Thread Size 'B'	Bore Diameter 'C'	Protrusion Length 'D'	Dimension 'E'		Installation Torque (Nm)
						A/F	A/C	
780DM1M1	M16 X 1.5	15	M16 X 1.5	11.0	45.6	30.0	33.0	7
780DM2M2	M20 X 1.5	15	M20 X 1.5	14.3	45.6	30.0	33.0	7
780DM3M3	M25 X 1.5	15	M25 X 1.5	20.3	46.2	34.0	39.0	10
780DM4M4	M32 X 1.5	15	M32 X 1.5	26.8	46.7	41.0	47.0	15
780DM5M5	M40 X 1.5	15	M40 X 1.5	32.7	47.2	49.0	56.0	25
780DM6M6	M50 X 1.5	15	M50 X 1.5	44.6	47.1	60.0	69.0	30
780DM7M7	M63 X 1.5	15	M63 X 1.5	56.5	51.4	72.0	83.0	45
780DM8M8	M75 X 1.5	15	M75 X 1.5	68.5	56.2	84.0	97.0	45
780DM9M9	M90 X 2	15	M90 X 2	81.0	61.0	99.0	114.0	45
780DM10M10	M100 X 2	15	M100 X 2	91.3	66.2	113.0	130.0	45
All dimensions shown are in millimetres unless otherwise stated								

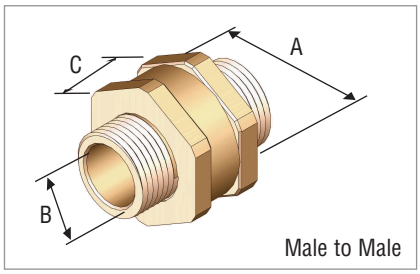
Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

Additional Approvals	
Gost Ex Approval Certificate	РОСС GB. ГБ 05.B01367, РОСС GB. ГБ 05.B01369
CSA Approval Certificate	1055233 Class I ABCD, Class II EFG, IP68 TYPE 4X Ex d / Ex e IIC

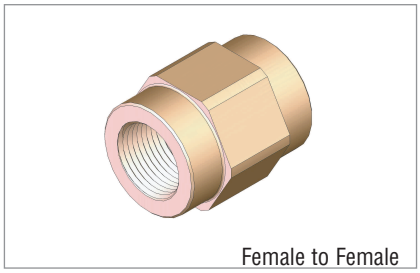
Note : Versions with Male Parallel threads are, as an option, also available with an integral 'O' Ring seal. For such options please add the suffix letter 'R' after the type number (780) in the ordering reference above, e.g 780RDM2M2.

Note : * Please refer to ordering guide tables on page 161 for reference definitions.

797 SERIES
Adaptors



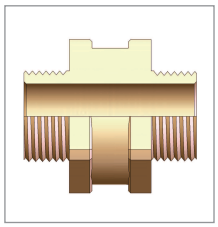
Male to Male

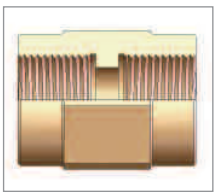

Female to Female

Male to Male & Female to Female Adaptor Type 797 with Flameproof Ex d I / Ex d IIC & Increased Safety Ex e I / Ex e II forms of protection.

The CMP Type 797 Male to Male and Female to Female Adaptor is designed to convert an existing enclosure aperture to the opposite male or female thread form. These Male to Male & Female to Female Adaptors can also be supplied with thread conversion between the two threads to either a reduced size or a different thread type, e.g. Metric to NPT, or NPT to Metric. Please refer to Table 'D' on page 161 for further information on these options. A General Purpose Industrial version is also available.

The CMP Type 797 Male to Male and Female to Female Adaptors are available in Brass, Aluminium or Stainless Steel and can be supplied for both Industrial and Hazardous Area applications, with Ex 'd' & Ex e Component and Equipment Approval.


Male to Male


Female to Female

Technical Data	
Type	**797**
Design Specification	BS 6121: Part 1: 1989, EN 50262:1999
ATEX Certification Detail	SIRA 01 ATEX 1284U, SIRA 02 ATEX 1003X
Code of Protection Category	ATEX Ⓔx II 2 GD Ex d IIC & Ex e II Component & Equipment, Zone 1, Zone 2, Zone 21, & Zone 22 - Gas Groups IIA, IIB, IIC ATEX Ⓔx IM 2 Ex d I & Ex e I
IECEx Certification Detail	IECEx SIR07.0052U
Code of Protection Category	Ex d I / Ex e I / Ex d IIC / Ex e II / Ex tD A21 IP6X
Compliance Standards	EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-1, IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 61241-1
Continous Operating Temperatures	-60ºC to + 200ºC
Ingress Protection Rating	IP66 or IP68 when fitted with a CMP 'O' Ring or Entry Thread Sealing Washer
Materials	Brass, Nickel Plated Brass, Aluminium, Stainless Steel
Optional Accessories	Locknut, Serrated Washer, Earth Tag, Entry Thread Sealing Washer

Product Selection Table (Female to Female)*

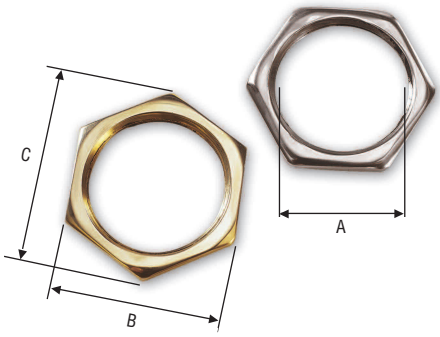
Ordering Reference	Male / Female Forward Thread Size	Minimum Thread Length	Male / Female Thread	Across Flats Dimension		Bore Diameter 'B'	Protrusion Length 'C'	Installation Torque (Nm)
				A/F	A/C			
797DM1FM1F	M16 X 1.5	15	M16 X 1.5	24.0	26.0	10.0	26.0	7
797DM2FM2F	M20 X 1.5	15	M20 X 1.5	24.0	26.0	14.3	26.0	7
797DM3FM3F	M25 X 1.5	15	M25 X 1.5	30.0	33.0	20.3	26.0	10
797DM4FM4F	M32 X 1.5	15	M32 X 1.5	36.0	40.0	26.8	26.0	15
797DM5FM5F	M40 X 1.5	15	M40 X 1.5	48.0	46.0	32.7	26.0	25
797DM6FM6F	M50 X 1.5	15	M50 X 1.5	55.0	61.0	44.6	26.0	30
797DM7FM7F	M63 X 1.5	15	M63 X 1.5	70.0	78.0	56.5	26.0	45
797DM8FM8F	M75 X 1.5	15	M75 X 1.5	80.0	89.0	68.5	26.0	45
797DM9FM9F	M90 X 1.5	15	M90 X 2	95.0	106.0	81.0	26.0	45
797DM10FM10F	M100 X 2	15	M100 X 2	110.0	123.0	91.0	36.0	45
All dimensions shown are in millimetres unless otherwise stated								

Marked with ATEX certification details as standard. Alternative certification marking shown in the table below can be applied if requested at the time of ordering.

Additional Approvals	
IEC Approval Certificate	SIRA 05 Y 1089U
Gost Ex Approval Certificate	РОСС GB.ГБ05.B01367, РОСС GB.ГБ05.B01369
CSA Approval Certificate	1055233 Class I ABCD, Class II EFG, IP68, TYPE 4X, Ex d / Ex e IIC

Note: For Male to Male versions please substitute (x2) the letter F with a letter M in the ordering references above. Versions with Male to Male Parallel threads are, as an option, also available with an integral 'O' Ring Seal. For such options please add the suffix letter 'R' after the type number (797) in the ordering reference above, e.g. 797RDM2MM2M

ACCESSORIES



LOCKNUTS

Brass Locknuts are the recommended items used in securing brass cable glands, unions, adaptors, reducers, and stopper plugs to a gland plate or into equipment.

Zinc Plated Mild Steel locknuts are a cost effective alternative to brass locknuts and should be used only in dry, low humidity conditions.

Aluminium locknuts are recommended when installing CMP Aluminium Cable Glands to prevent the electrolytic action of galvanic corrosion which can occur when dis-similar metals are coupled together.

Note: Alternative materials are also available. Please refer to Table 'E' on page 161 for ordering reference numbers, e.g 20LN4 for M20 Stainless Steel Locknut, 050NPTLN4 for 1/2" NPT Stainless Steel Locknut.

METRIC - LOCKNUTS

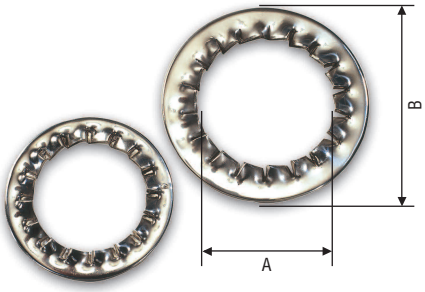
Ordering Reference (Brass)	Thread Diameter 'A'	Minimum Thickness	Across Flats Dimension 'B'	Across Corners Diameter 'C'
16LN	M16 X 1.5	3.2	22.0	25.4
20LN	M20 X 1.5	3.2	24.0	28.6
25LN	M25 X 1.5	3.2	30.0	35.0
32LN	M32 X 1.5	3.2	36.0	42.0
40LN	M40 X 1.5	4.8	46.0	53.0
50LN	M50 X 1.5	6.3	55.0	64.0
63LN	M63 X 1.5	6.3	70.0	81.0
75LN	M75 X 1.5	6.3	80.0	98.0
90LN	M90 X 2	9.5	108.0	125.0
100LN	M100 X 2	9.5	122.0	141.5

All dimensions shown are in millimetres unless otherwise stated

NPT - LOCKNUTS

Ordering Reference (Brass)	Thread Diameter 'A'	Minimum Thickness	Across Flats Dimension 'B'	Across Corners Diameter 'C'
050NPTLN	1/2" NPT	4.75	27.0	29.3
075NPTLN	3/4"NPT	4.75	33.0	35.8
100NPTLN	1" NPT	4.5	41.0	45.0
125NPTLN	1 1/4" NPT	4.75	50.0	53.4
150NPTLN	1 1/2"NPT	5.1	60.0	69.0
200NPTLN	2" NPT	5.1	70.0	80.2
250NPTLN	2 1/2" NPT	10.0	79.0	90.5
300NPTLN	3" NPT	10.0	108.0	123.0
350NPTLN	3 1/2" NPT	11.5	114.0	131.0

All dimensions shown are in millimetres unless otherwise stated



SERRATED WASHERS

Available in Stainless Steel as standard, these "shake-proof" Serrated Washers fitted internally to the equipment and before a locknut act as an anti-vibration device to prevent the cable gland or other cable entry device and locknut arrangement from inadvertently loosening in service.

Note: Alternative materials are also available. Please refer to Table 'E' on page 161 for ordering reference numbers, e.g 20SW4 for M20 Stainless Steel Serrated Washer, 050NPTSW4 for 1/2" NPT Stainless Steel Serrated Washer.

METRIC - SERRATED WASHERS

Ordering Reference (Plated Steel)	Reference Diameter 'A'	Minimum Thickness	External Diameter 'B'
16SW	M16	3.3	25.4
20SW	M20	3.7	32.0
25SW	M25	3.7	40.0
32SW	M32	3.7	44.0
40SW	M40	3.7	59.0
50SW	M50	3.7	80.0
63SW	M63	4.5	100.0
75SW	M75	5.0	112.0
90SW	M90	5.0	120.0
100SW	M100	6.3	150.0

All dimensions shown are in millimetres unless otherwise stated

NPT - SERRATED WASHERS

Ordering Reference (Plated Steel)	Reference Diameter 'A'	Minimum Thickness	External Diameter 'B'
050NPTSW	1/2" NPT	3.7	32.0
075NPTSW	3/4"NPT	3.7	40.0
100NPTSW	1" NPT	3.7	44.0
125NPTSW	1 1/4" NPT	3.7	59.0
150NPTSW	1 1/2"NPT	3.7	80.0
200NPTSW	2" NPT	4.5	100.0
250NPTSW	2 1/2" NPT	5.0	112.0
300NPTSW	3" NPT	5.0	120.0
350NPTSW	3 1/2" NPT	6.3	150.0

All dimensions shown are in millimetres unless otherwise stated

ACCESSORIES

EARTH TAGS

CMP slip on earth tags, Installed between the cable gland and equipment, provide an earth bond connection as specified in BS6121:Part 5:1993 and also complies with category 'B' rating specified in BS EN 50262:1999. The following table of fault current ratings relates to CMP Brass Earth Tags.

CMP Earth Tag Size	Short Circuit Ratings Symmetrical Fault Current (kA) for 1 second
20	3.06
25	4.00
32	5.40
40	7.20
50	10.40
63	10.40
75	10.40

Note: Alternative materials are also available. Please refer to Table 'E' on page 161 for ordering reference numbers, e.g 20ET4 for M20 Stainless Steel Earth Tag, 050NPTET4 for 1/2" NPT Stainless Steel Earth Tag.

METRIC - EARTH TAGS

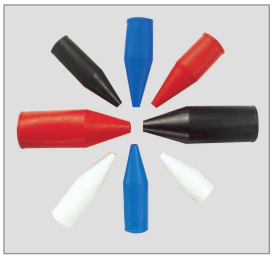
Ordering Reference (Brass)	Reference Diameter 'A'	Minimum Thickness	Nominal Diameter 'C'	Hole Size 'D'	Nominal Length 'E'	Nominal Centres 'F'
16ET	M16	1.5	25.4	M6	49.3	30.2
20ET	M20	1.5	27.1	M6	53.4	33.1
25ET	M25	1.5	35.1	M6	59.4	35.6
32ET	M32	1.5	45.2	M12	77.0	43.1
40ET	M40	1.5	53.7	M13	88.7	45.4
50ET	M50	1.5	65.2	M13	111.1	58.1
63ET	M63	1.5	82.6	M13	128.6	66.8
75ET	M75	1.5	95.4	M13	141.1	73.0
90ET	M90	1.5	114.2	M13	161.0	85.0
100ET	M100	1.5	126.0	M13	194.0	118.0

All dimensions shown are in millimetres unless otherwise stated

NPT - EARTH TAGS

Ordering Reference (Brass)	Reference Diameter 'A'	Minimum Thickness	Nominal Diameter 'C'	Hole Size 'D'	Nominal Length 'E'	Nominal Centres 'F'
050NPTET	1/2" NPT	1.5	27.1	M6	53.4	33.1
075NPTET	3/4"NPT	1.5	35.1	M6	59.4	35.6
100NPTET	1" NPT	1.5	45.2	M12	77.0	43.1
125NPTET	1 1/4" NPT	1.5	53.7	M13	88.7	45.4
150NPTET	1 1/2"NPT	1.5	65.2	M13	111.1	58.1
200NPTET	2" NPT	1.5	82.6	M13	128.6	66.8
250NPTET	2 1/2" NPT	1.5	95.4	M13	141.1	73.0
300NPTET	3" NPT	1.5	114.2	M13	161.0	85.0
350NPTET	3 1/2" NPT	1.5	126.0	M13	194.0	118.0

All dimensions shown are in millimetres unless otherwise stated



SHROUDS

CMP manufacture a range of push on shrouds which are used to minimise the risk of dirt or foreign substances gathering on the Cable Gland body, and/or point of cable to gland interface. Standard shrouds are produced in Black PVC and PCP. CMP LSF (Blue/Grey) shrouds are available from stock. Table below shows typical examples of CMP shrouds.

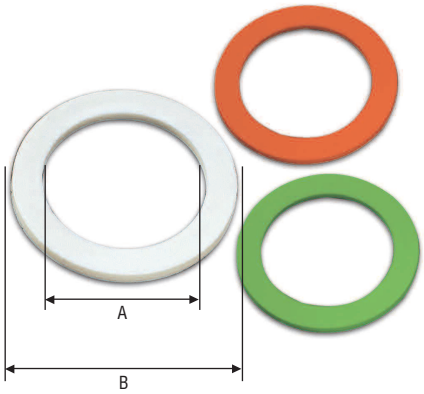
SHROUD REFRENCES

GLAND TYPE	20/16	20S	20	25	32	40	50S	50	63S	63	75S	75	90
BWL	PVC02	PVC04	PVC06	PVC09	PVC11	PVC13	PVC17	PVC20	PVC22	PVC25	PVC28	PVC30	PVC32
A2	PVC02	PVC04	PVC05	PVC09	PVC10	PVC13	PVC14	PVC17	PVC20	PVC22	PVC24	PVC26	PVC31
E1W	PVC02	PVC04	PVC06	PVC09	PVC11	PVC15	PVC18	PVC21	PVC23	PVC25	PVC28	PVC30	PVC32

COLOUR CODED SHROUDS

PVC, PCP & LSF shrouds are also manufactured in alternative colours including Red, Blue and White, to suit a wide variety of customer requirements, other colours are available.

ACCESSORIES



ENTRY THREAD SEALING WASHERS

To maintain the Ingress Protection rating between the equipment and cable gland it may be necessary to fit an Entry Thread Sealing Washer at the gland entry interface. For Explosion Protected equipment it is essential to maintain the integrity of the degree of Ingress Protection at which the equipment has been rated.

The need for a sealing washer will very much depend on the Ingress Protection rating and code of protection of the equipment and the type of entry holes available within that equipment.

For example when Ex e apparatus or terminal boxes which are permitted to have untapped through clearance holes it will be necessary to fit a sealing washer to ensure that the minimum IP54 requirement (for gas / vapour hazards) is met. Whereas other equipment having tapped entry holes may not require a sealing washer to maintain the rated integrity of the installation, or the minimum requirement for the specified form of protection.

The CMP Entry Thread Sealing Washers are produced in 2mm Thick White Nylon as standard which are recommended and meet the specified requirements of Shell's Offshore operations.

To verify the effectiveness of the CMP nylon entry sealing washers independent 3rd party tests to EN 60529 have been successfully conducted on Cable Gland at IP66, IP67 & IP68 levels of protection. CMP can therefore provide Independent documentary evidence of such tests to the highest standards.

Red Fibre Washers can also be supplied to order but careful consideration should be given to their use in sub zero climates where absorption, freezing and cracking have been known to occur, ultimately impairing the degree of Ingress Protection attainable.

CMP also offers as an alternative, cable glands, adaptors, reducers, and stopper plugs with Integral Entry Thread 'O' Ring Seal, as pictured opposite.

WHITE METRIC ENTRY THREAD SEALING WASHERS

Ordering Reference	Reference Diameter 'A'	Minimum Thickness	External Diameter 'B'
16ETS2	M16	2.0	25.4
20ETS2	M20	2.0	28.6
25ETS2	M25	2.0	35.0
32ETS2	M32	2.0	44.5
40ETS2	M40	2.0	50.8
50ETS2	M50	2.0	65.0
63ETS2	M63	2.0	76.2
75ETS2	M75	2.0	95.0
90ETS2	M90	2.0	110.0

All dimensions shown are in millimetres unless otherwise stated

GREEN NPT ENTRY THREAD SEALING WASHERS

Ordering Reference	Reference Diameter 'A'	Minimum Thickness	External Diameter 'B'
050NPTETS	1/2" NPT	2.0	28.6
075NPTETS	3/4"NPT	2.0	35.0
100NPTETS	1" NPT	2.0	44.5
125NPTETS	1 1/4" NPT	2.0	50.8
150NPTETS	1 1/2"NPT	2.0	65.0
200NPTETS	2" NPT	2.0	76.2
250NPTETS	2 1/2" NPT	2.0	95.0
300NPTETS	3" NPT	2.0	110.0

All dimensions shown are in millimetres unless otherwise stated

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