

# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-10496

This is to certify that the  
**Cable Gland**

with type designation(s)  
**CMP**

Manufactured by

**CMP Products Ltd**  
Newcastle-upon-Tyne NE61BS, United Kingdom

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application

**Hazardous areas cable glands. The manufacturer's installation description to be followed.**

Høvik, 2010-10-05  
for Det Norske Veritas AS

Marit Laumann  
Head of Section



DNV local office:  
Newcastle-upon-Tyne

This Certificate is valid until  
2014-12-31

Sverre Eriksen  
Surveyor

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



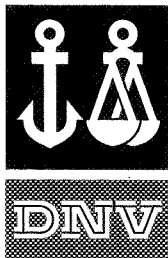
Certificate No.: E-10496  
 File No.: 828.90  
 Job Id.: 262.1-009667-1

## Product description

Type	A2F
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II / Ex nR
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0039X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66, IP67 & IP68 (10m depth)
Gland material	Brass (option of stainless steel or aluminium versions)
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured or braid.
Gland sizes	16, 20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	A2FRC
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0040X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66
Gland material	Brass (option of stainless steel or aluminium)
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured or braid.
Gland sizes	20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	E1F# (W, X, U)
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II / Ex nR
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0043X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66
Gland material	Brass (option of stainless steel or aluminium)
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured, armoured or braid.
Gland sizes	16, 20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.



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Type	E2F## (W, X, U)
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0043X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66
Gland material	Brass (option of stainless steel or aluminium)
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured, armoured or braid.
Gland sizes	16, 20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	PX## (2K, 2KW, 2KX, B2KW, SS2K, RC, PB)
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0044X
Continuous operating temperature range	-60° to +100° C ( -60° to +85° C with Rapid Ex resin.)
Ingress protection	IP66, IP67 & IP68 (10m depth)
Gland material	Brass (option of stainless steel or aluminium)
Seal material	Epoxy putty and LSF Thermoplastic Elastomer
Cable type	Unarmoured, armoured or braid.
Gland sizes	20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	SS2K ( & SS2KPB)
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0041X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66
Gland material	Brass (option of stainless steel or aluminium)
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured or braid.
Gland sizes	16, 20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.



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Type	TMC
Design Specification	UL514B, U886, UL2225
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	UL514B; U886; CSA Standard C22.2 No 18,174; EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 07ATEX 1122X IEC Ex SIR07.0083X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66, NEMA 4X (Oil RES II)
Gland material	Nickel plated brass or aluminium or stainless steel
Seal material	LSF Thermoplastic Elastomer
Cable type	MC/MCHL ; TECK ; CLX
Gland sizes	20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	TMCX
Design Specification	UL514B, U886, UL2225
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	UL514B; U886; CSA Standard C22.2 No 18,174; EN/IEC60079:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 07ATEX 1122X IEC Ex SIR07.0083X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66, NEMA 4X (Oil RES II)
Gland material	Nickel plated brass or aluminium or stainless steel
Seal material	Epoxy putty and LSF Thermoplastic Elastomer
Cable type	MC/MCHL ; TECK ; CLX
Gland sizes	20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	G# (We, Xe, 2K, 2KX)
Design Specification	BS EN50262:1999
Classification	Hazardous Area Ex d IIC / Exe II
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2003, IEC 61241-0:2004, IEC 61241-1:2004
Certification	SIRA 06ATEX 1097X IEC Ex SIR 06.0042X
Continuous operating temperature range	-60° to +130° C
Ingress protection	IP66, IP67 & IP68 (10m depth)
Gland material	Brass (option of stainless steel or aluminium)
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured, armoured or braid.
Gland sizes	16, 20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.



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Type	TRITON T3CDS, T3CDS/PE, D3CDS
Classification	Hazardous Area Ex d IIC / Ex e II
Compliance Code	EN/IEC60079-0:2004, EN/IEC60079-1:2004, EN/IEC60079-7:2006, EN/IEC60079-15:2005 IEC 61241-0:2004, IEC61241-1:2004
Certification	SIRA 06ATEX1283X IEC SIR07.0005X
Ingress Protection	IP66, IP67 & IP68
Gland Material	Brass (option of stainless steel or aluminium)
Seal Material	LSF Thermoplastic Elastomer
Cable Type	S.W.A. S.T.A. & wire braid
Deluge protection	To DTS 01:91
Gland sizes	16, 20s/16, 20s, 20, 25, 32, 40, 50 S, 50, 63 S, 63,75 S, 75, 90, 100, 115 and 130

Type	TMC2
Design Specification	UL514B, U886, UL2225
Classification	Ordinary and hazardous locations
Compliance Code	UL514B; U886; CSA Standard C22.2 No 18,174; EN/IEC60079-0:2006; EN/IEC 60079-7:2007; EN/IEC 61241-1:2004; EN/IEC 61241-0:2007
Certification	
Continuous operating temperature range	-60° to +110° C
Ingress protection	IP66, NEMA 4X (Oil RES II)
Gland material	Nickel plated brass or aluminium or stainless steel
Seal material	LSF Thermoplastic Elastomer
Cable type	MC/MCHL ; TECK ; CLX
Gland sizes	20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

Type	TMC2X
Design Specification	UL514B, U886, UL2225
Classification	Ordinary and hazardous locations
Compliance Code	UL514B; U886; CSA Standard C22.2 No 18,174; ; EN/IEC60079-0:2006; EN/IEC 60079-7:2007; EN/IEC 61241-1:2004; EN/IEC 61241-0:2007
Certification	
Continuous operating temperature range	-60° to +85° C
Ingress protection	IP66, NEMA 4X (Oil RES II)
Gland material	Nickel plated brass or aluminium or stainless steel
Seal material	Polyurethane resin and LSF Thermoplastic Elastomer
Cable type	MC/MCHL ; TECK ; CLX
Gland sizes	20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.



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Type	TC
Design Specification	UL514B, U886, UL2225
Classification	Ordinary and hazardous locations
Compliance Code	UL514B; U886; CSA Standard C22.2 No 18,174; ; EN/IEC60079-0:2006; EN/IEC 60079-7:2007; EN/IEC 61241-1:2004; EN/IEC 61241-0:2007
Certification	
Continuous operating temperature range	-60° to +110° C
Ingress protection	IP66, NEMA 4X
Gland material	Nickel plated brass or aluminium or stainless steel
Seal material	LSF Thermoplastic Elastomer
Cable type	Unarmoured or braid
Gland sizes	16, 20s/16, 20s, 20, 25s, 25, 32, 40, 50s, 50, 63s, 63, 75s, 75, 90, 100, 115, 130
Optional accessories	Shroud, Locknut, Earth tag, Entry thread seal, serrated washer, Adaptor/Reducer.

### Application/Limitation

Manufacturer's application instructions to be followed.  
 Manufacturer's assembly instructions to be followed.

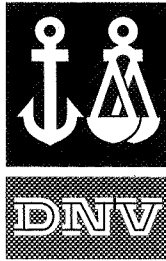
The information related to Ex certification from recognised test institution is given as information only.

### Type Approval documentation

#### Drawings:

CWe	General Arrangement No. GA 169 dated 28/05/2008
CXe	General arrangement No. GA 170 dated 28/05/2008
E1FW & E2FW	General arrangement No. GA 171 dated 05/05/2009
C2K, C2KX	General arrangement No. GA 174 dated 06/05/2009
PX2K	General arrangement No. GA 175 dated 04/11/2009
A2F	General arrangement No. GA 176 dated 05/05/2009
A2FRC	General arrangement No. GA 177 dated 05/05/2009
PX2KW	General arrangement No. GA 178 dated 04/11/2009
PX2KX	General arrangement No. GA 179 dated 04/11/2009
PXB2KW	General arrangement No. GA 181 dated 04/11/2009
PXSS2K	General arrangement No. GA 183 dated 04/11/2009
SS2K	General arrangement No. GA 184 dated 05/05/2009
E1FXZ & E2FXZ & E1FT	General arrangement No. GA 185 dated 28/05/2009
E1FU & E2FU	General arrangement No. GA 186 dated 05/05/2009
TMC	General Arrangement No. GA166 dated 03/10/2007
TMCX	General Arrangement No. GA167 dated 01/08/2007
TMC2	General Arrangement No. GA205 dated 24/01/2008
TMC2X	General Arrangement No. GA206 dated 24/01/2008
TC	General Arrangement No. GA204 dated 05/03/2009
PRXC	General Arrangement No. GA203 dated 05/02/2010

Tolerances	Drawing No. MP888 dated 07/05/2009
Optional 'O'-ring face seal groove details	Drawing No. SCH0143 dated 02/06/2006
PX PB armour Cone	Drawing No. SCH0208 dated 02/06/2006
Inner seal operational details,	Drawing No. SCH0234 dated 06/09/2007
Armour clamp operational details,	Drawing No. SCH0235 dated 05/05/2009
ATEX outer seal arrangement,	Drawing No. SCH0242 dated 05/05/2009
PX & PXSS2K entry item details,	Drawing No. SCH0245 dated 25/04/2008
PXSS2K & SS2K outer seal details,	Drawing No. SCH0246 dated 25/04/2008
PX armour clamping details,	Drawing No. SCH0247 dated 22/07/2008
Item 1 with earthing stud facility,	Drawing No. SCH0250 dated 21/04/2010



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**Test reports/Certificates:**

EC type-examination certificate Sira 06ATEX1097X dated 28/04/2010 (covering ranges of cable glands types A2F, A2FRC, SS2K, C\*\*, E\*\* and PX\*\*).

IECEX Certificate of conformity IECEX SIR 06.0039X dated 25/11/2009 (A2F range)  
IECEX Certificate of conformity IECEX SIR 06.0040X dated 25/11/2009 (A2FRC range)  
IECEX Certificate of conformity IECEX SIR 06.0041X dated 25/11/2009 (SS2K & SS2KPB range)  
IECEX Certificate of conformity IECEX SIR 06.0042X dated 25/11/2009 (C\*\* range)  
IECEX Certificate of conformity IECEX SIR 06.0043X dated 25/11/2009 (E\*\* range)  
IECEX Certificate of conformity IECEX SIR 06.0044X dated 25/11/2009 (PX\*\* range)  
IEC Ex Certificate of Conformity SIR07.0005X dated 25/11/2007 (T3CDS / T3CDS/PB ranges)  
IEC Ex Certificate of Conformity SIR07.0083X dated 19/10/2007 (TMC / TMCX ranges)  
IEC Ex Certificate of Conformity SIR09.0068X dated 02/09/2009 (TMC2 range)  
IEC Ex Certificate of Conformity SIR09.0069X dated 02/09/2009 (TMC2X range)  
IEC Ex Certificate of Conformity SIR09.0042X dated 30/04/2009 (TC range)  
Sira Quality Assurance Notification No. SIRA 01 ATEX M102 dated 28/04/2010.  
Sira 06ATEX1283X for type T3CDS and T3CDS/PB dated 19/11/2009.

UL Ex test certificates nos. E200163, E161256 & E201187 dated 1999-08-27, 2001-04-16 & 2001-05-21, CSA "Certificate of compliance" nos. 1129334 & 1129339 dated 2001-05-01&02, Shell Deluge Test (DTS 01:91) Report 50461 dated August 1995.

**Tests carried out**

Type tests in according to IEC 60079-0, IEC 60079-1, and IEC 60079-7, UL standard.

**Marking of product**

CMP – type designation – Ex rating.

**Certificate Retention Survey**

The scope of the retention/renewal survey is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Survey to be performed at least every second year.

END OF CERTIFICATE