

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Gland**

with type designation(s)

KBA, KBAO, KBAU, KBAT, KBA..LT, EBU, EBM, EBS, EBUF, EBMC, EBLQ, EBLs, EBLN, EBMS, NBU, BA, SV..H, BDRV, Metal adaptors and plugs (B-RA, B-RB, B-RM, B-RN, B-TS)

Issued to

**Bimed Teknik Aletler San. Tic. A.S.
ISTANBUL, Turkey**

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 & cable gland's accessories. Manufacturer's installation description shall be followed.**This Certificate is valid until **2019-06-30**.Issued at **Høvik** on **2015-03-10**DNV GL local station: **Istanbul**for **DNV GL**Approval Engineer: **Marta Alonso Pontes**

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Marit Laumann
Head of Section

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.

Certificate No: **E-14044**
 File No: **828.90**
 Job Id: **262.1-018821-1**

Product description

Type	ORION (KBA, KBAO, KBAU, KBA..LT)
Design specification/ Compliance code	IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-31:2008, IEC 60079-7:2006, IEC 62444 :2010
Classification Hazardous area	Ex d IIC Gb/ Ex e IIC Gb/ Ex tb IIIC Db
Certification	IECEX CES 13.0013X ; CESI 13 ATEX 033X
Continuous operating temperature range	For Chloroprene rubber : -40°C to + 100°C (-40°C to + 80°C for KBALT) For Silicon rubber : -60°C to + 130 °C (-60°C to + 80°C for KBALT) Up to -20°C for galvanized carbon steel models
Ingress protection	IP66/IP68
Gland material	Brass, stainless steel or galvanized carbon steel
Seal material	Chloroprene rubber or silicon rubber
Cable type	Armoured (KBA), Shielded (KBAO), Armoured or shielded (KBAU and KBALT)
Gland sizes	Metric thread size:16,20,25,32,40,50,63,75,90 NPT thread size :3/8",1/2",3/4",1",1¼",1½",2", 2½", 3

Type	TAURUS (KBAT)
Design specification/ Compliance code	IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-31:2008, IEC 60079-7:2006, IEC 62444 :2010
Classification Hazardous area	Ex d IIC Gb/ Ex e IIC Gb/ Ex tb IIIC Db
Certification	IECEX CES 13.0013X ; CESI 13 ATEX 033X
Continuous operating temperature range	For Chloroprene rubber : -40°C to + 80°C For Silicon rubber : -60°C to + 100 °C Up to -20°C for galvanized carbon steel models
Ingress protection	IP66/IP68
Gland material	Brass, stainless steel or galvanized carbon steel
Seal material	Chloroprene rubber or silicon rubber
Cable type	Armoured
Gland sizes	Metric thread size:16,20,25,32,40,50,63 NPT thread size :3/8",1/2",3/4",1",1¼",1½",2"

Type	OCTANS (EBU, EBM, EBS, EBUF, EBMC, EBLQ, EBLS, EBLN, EBMS)
Design specification/ Compliance code	IEC/EN60079-0:2011(2012),IEC/EN60079-1:2007, IEC/EN60079-31:2008(2009), IEC60079-7 :2006, IEC/EN62444:2010(2013)
Classification Hazardous area	Ex e IIC Gb/ Ex d IIC Gb/ Ex tb IIIC Db IP66/68
Certification	IMQ 13 ATEX 018X, IECEX IMQ 13.0006X
Continuous operating temperature range	For Chloroprene rubber: -40°C to + 80°C For Silicon rubber: -60°C to + 80 °C
Ingress protection	IP66/68
Gland material	Aluminium, stainless steel, brass
Seal material	Chloroprene rubber or silicon rubber
Cable type	Not armoured
Gland sizes	Metric thread size:8,12,16,20,25,32,40,50,63,75,90,100, 110 NPT thread size:1/4",3/8",1/2",3/4",1",1¼",1½",2",2½",3, 4"

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Type	NORMA (NBU)
Design specification/ Compliance code	IEC/EN60079-0:2011(2012), IEC/EN60079-31: 2008(2009), IEC60079-7:2006, IEC/EN62444:2010(2013)
Classification Hazardous area	Ex e IIC Gb/ Ex tb IIIC Db IP66/68
Certification	IMQ 13 ATEX 018X, IECEx IMQ 13.0006X
Continuous operating temperature range	For EPDM rubber: -40°C to + 80°C For Silicon rubber: -60°C to + 80°C
Ingress protection	IP66/68
Gland material	Aluminium, stainless steel, brass
Seal material	EPDM rubber or silicone
Cable type	Not armoured
Gland sizes	Metric thread size:12,16,20,25,32,40,50,63 NPT thread size:1/4",3/8",1/2",3/4",1",1¼",1½",2"

Type	DORADO (BA)
Design specification/ Compliance code	EN60079-0:2009, EN60079-1:2007, EN60079-7:2007, EN60079-31:2009, EN62444:2013
Classification Hazardous area	Ex d IIC Gb/ Ex e IIC Gb/ Ex d I Mb/ Ex e I Mb/ Ex tb IIIC Db IP66/68
Certification	IMQ 11 ATEX 036,
Continuous operating temperature range	For Nitrile rubber: -30°C to + 120°C For Chloroprene rubber: -40°C to + 100°C For Silicone rubber: -60°C to + 180°C
Ingress protection	IP66/68
Gland material	Brass, Stainless steel
Seal material	Nitrile rubber, chloroprene rubber or silicone rubber
Cable type	Armoured
Gland sizes	Metric thread size: 16,20,25,32,40,50,63,75,90,110 NPT thread size: 3/8",1/2",3/4",1",1¼",1½",2",2½",3, 4"

Type	PHOENIX (SV..H)
Design specification/ Compliance code	IEC/EN60079-0:2011(2012), IEC/EN60079-7:2006(2007), IEC/EN60079-31:2008(2009), IEC/EN62444:2010(2013)
Classification Hazardous area	Ex e IIC Gb/ Ex tb IIIC Db IP66/68
Certification	IMQ 13 ATEX 029X, IECEx IMQ 14.0002X
Continuous operating temperature range	For Silicone rubber: -60°C to + 80°C
Ingress protection	IP66/68
Gland material	Brass, stainless steel
Seal material	Silicone rubber
Cable type	Not armoured
Gland sizes	Metric thread size: 25 NPT thread size: 3/4"

Type	VIRGO (BDRV) drain valve
Design specification/ Compliance code	IEC/EN60079-0:2011(2012), IEC/EN60079-7:2006(2007), IEC/EN60079-31:2008(2009)
Classification Hazardous area	Ex e IIC Gb/ Ex tb IIIC Db IP66
Certification	IMQ 13 ATEX 030 U, IECEx IMQ 14.0003U
Continuous operating temperature range	-60°C to + 85°C

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Ingress protection	IP66
Gland material	Brass, stainless steel
Seal material	Silicon rubber
Cable type	
Gland sizes	Metric thread size: 20, 25 NPT thread size: 1/2", 3/4"

Type	Metal adaptors and plugs (B-RA, B-RB, B-RM, B-RN, B-TS)
Design specification/ Compliance code	IEC/EN60079-0:2011(2012), IEC/EN60079-7:2006(2007), IEC/EN60079-31:2008(2009), IEC/EN60079-1:2007
Classification Hazardous area	Ex d IIC Gb/ Ex e IIC Gb/ Ex tb IIIC Db
Certification	IECEx CES 13.0022X, CESI 13 ATEX 066X
Continuous operating temperature range	For brass and stainless steel: -40°C to +100°C For galvanized carbon steel: -20°C to +100°C
Ingress protection	IP66/68
Gland material	Brass, stainless steel, galvanized carbon steel
Seal material	Chloroprene rubber
Gland sizes	Metric thread size: 16, 20, 25, 32, 40, 50, 63, 75, 90, 110 NPT thread size: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3, 4"

Application/Limitation

Manufacturer's application and assembly instructions shall be followed.

The information related to Ex certification from recognized test institution is given as information only. Applications where Ex certified equipment is required will in general be subject to approval case by case based on documentation as required in DNV rules.

Type Approval documentation

[Documentation linked to App. Letter with Ref. MCANO381/PONT/262.1-018821-J-13 dated 06.02.2015](#)

Tests carried out

Type tests in accordance with IEC/EN60079-0, IEC/EN60079-7, IEC/EN60079-31, IEC/EN60079-1 & IEC/EN 62444

Marking of product

BMD – type designation – Ex rating

Periodical assessment

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

The main elements of the periodical assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routines (RT) checked (if not available tests according to 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.

Periodical assessment to be performed at least every second year.

END OF CERTIFICATE