

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Gland

with type designation(s)
V-TEC VM, V-TEC L VM, V-TEC Pg, V-TEC Pg L

Issued to
OBO Bettermann GmbH & Co. KG
Menden, Germany

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Cable glands for non-hazardous areas.

This Certificate is valid until **2020-12-31**.

Issued at **Hamburg** on **2016-02-03**

DNV GL local station: **Essen**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**

Duy Nam Le
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.

Product description

Classification according to EN 50262:

Type designation	V-TEC VM
6.1 Material (Metallic, Non-metallic, composite)	Non-metalic (Polyamid)
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage, type A
6.3 Electrical properties (with electric continuity or insulating characteristics)	With insulating characteristic
6.4 Resistance to external influences	
6.4.1 IP class	IP68 5 bar/1hr.
6.4.2 Temperature range if different from -20C to +65C	
Gland sizes [mm]	M12 - M63
Seal material	Chloroprene / nitrile rubber

Type designation	V-TEC L VM
6.1 Material (Metallic, Non-metallic, composite)	Non-metalic (Polyamid)
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage, type A
6.3 Electrical properties (with electric continuity or insulating characteristics)	With insulating characteristic
6.4 Resistance to external influences	
6.4.1 IP class	IP68 5 bar/1hr.
6.4.2 Temperature range if different from -20C to +65C	
Gland sizes [mm]	M12 - M63
Seal material	Chloroprene / nitrile rubber

Job Id: **262.1-010455-4**
Certificate No: **TAE00000YT**

Type designation	V-TEC Pg
6.1 Material (Metallic, Non-metallic, composite)	Non-metallic (Polyamid)
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage, type not declared
6.3 Electrical properties (with electric continuity or insulating characteristics)	With insulating characteristics (according to DIN VDE 0619)
6.4 Resistance to external influences	
6.4.1 IP class	IP68 5 bar/1hr.
6.4.2 Temperature range if different from -20C to +65C	
Gland sizes [mm]	Pg 7 - Pg 48
Seal material	Chloroprene / nitrile rubber

Type designation	V-TEC Pg L
6.1 Material (Metallic, Non-metallic, composite)	Non-metallic (Polyamid)
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	With cable anchorage, type not declared
6.3 Electrical properties (with electric continuity or insulating characteristics)	With insulating characteristics (according to DIN VDE 0619)
6.4 Resistance to external influences	
6.4.1 IP class	IP68 5 bar/1hr.
6.4.2 Temperature range if different from -20C to +65C	
Gland sizes [mm]	Pg 7 - Pg 48
Seal material	Chloroprene / nitrile rubber

Application/Limitation

For use in non-hazardous areas. The manufacturer's installation description to be followed.

Type Approval documentation

Test reports:

VDE Prüf- und Zertifizierungsinstitut, Abteilung TI Aktenzeichen 2480-1490-1029, dated 05.04.1993
VDE-PZI, F 31, 2480-1492-0002 / 32K3J, dated 30.01.2001

Data sheets / drawings:

01 VBS Katalog 2010_Neur_stand / en / 15/02/2010 (LLExpert_00943) page 204, 205, 206 and 207.

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Tests carried out

Type tests in accordance with EN 50262, except the PG glands that are tested according to DIN VDE 0619 (predecessor document of EN 50262).

Marking of product

OBO – type designation.

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 of factory samples, selected at random from the production line (where practicable)
- Results from production sample tests (PST) and routine tests (RT) to be checked (if not available tests according to PST and RT to be carried out)
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and type approval certificate

Survey shall be performed at least every second year.

END OF CERTIFICATE