



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE000007F
Revision No:
2

This is to certify:

that the **Conduit, Fitting, Cable Pipe, Box, Etc.**

with type designation(s)

PARAB & PARNB conduit with PAHOB system supports, PAGOB & VPGRB straight connectors, VPBRB 90 degree elbow, T & Y distributors

issued to

REIKU GmbH

Wiehl, Nordrhein-Westfalen, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2024-07-08**

for **DNV**

This Certificate is valid until **2029-07-07**.

DNV local unit: **Essen**

Approval Engineer: **Carsten Hunsalz**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Protection and support system for cables and wires, consisting of corrugated tubing, system supports, straight connectors, 90 degree arched elbow, T-and Y-distributors.

Corrugated tubing of various colours made from Polyamid 6 (PA-6) and Polyamid 12 (PA-12), self-extinguishing, halogen free. Resistant to alcohol, grease, mineral oil, diesel oil, benzine and UV.

Conduits:

Type	Sizes Outer diameter (mm)	Ingress protection	Temperature range
PARNB*	10 to 54,5	At least IP 54	+40 °C to +105 °C
PARAB**	13 to 82,5	At least IP 54	+40 °C to +105 °C

* For detailed information see "Article report".

** For detailed information see "Datenblatt Rohrtype / Datasheet Corr. Tubing PARAB-NW10-NW70"

Application/Limitation

For use as cable support and protection inside cabinets.

Tubings are for mechanical protection. Tubings shall not to be used as an insulator.

The conduit must support the cables not vice versa.

When used outside cabinets, the conduit must give added protection to cables – not wires. Conduits with wires are not substitutes for cables.

Not for use through areas where water or gas tightness is required. Nor through areas of different fire or hazardous zones.

Type Approval documentation

Technical info: "Datenblatt Rohrtype / Datasheet Corr. Tubing PARAB-NW10-NW70
 Article report including drawings and Reiku datasheet Corr. Tubing PARNB-NW07 – NW48. Rev. 04 Special operational limitations referring to DIN EN 61386-1 :2008.
 "Technische Information Polyblac® PA 70043/2. Datenblatt Rohrtype / Datasheet Corr. Tubing PARNG/B-NW07 – NW95"

Test certificate: UL no. YDRQ2.E168970 dated 2018-01-09, File E168970 dated 1995-09-15 . "DNV GL - Audit on 2018-02-07", Certificate of Compliance 2022-09-09

Test reports: Versuchsbegleitprotokoll (Accompanying log-book for testing) dated 2015-07-30, 2015-08-04, 2024-05-03 & 2024-06-17. Accompany log-book of pressure test dated 2015-07-30. Unterlagen zum DNV – Audit am 2014.02.26. Fire behaviour test report nos. 06-P-4010-TZF91-PR-4607/08/09 dated 2006-02-10,

Tests carried out

Type tests in accordance with IEC 61386-1:2008

Conduits passed the following tests carried out witnessed to DNV inspector:

- Compression Test (Druckprüfung)
- Cold Impact Test (Schlagprüfung an gefrorenem Wellrohr)
- Flexibility Test (Flexibilitätsprüfung)
- Resistance to flame propagation; Light emitting filament check and flame impingement by means of a burner (Widerstand gegenüber Flammausbreitung; Glühdrahtprüfung und beflammung mittels eines Bunsenbrenners)
- External Influences (Äußere Einflüsse)

Following documents were submitted concerning carried out and passed tests of independent testing facilities:

- Tests acc. to UL1696 concerning:



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Heat Aging Test, Cold Bend Test, Heat Shock Test, Crush Test, Impact Test, All Tubing Flame Test, Fitting Strain Relief Test

- Test Report of Klöckner Moeller concerning ingress protection (IP67)

Marking of product

REIKU - Type - Size - Ref. no.

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 assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (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 is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE