



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAE0000188**  
Revision No:  
**1**

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## This is to certify:

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

with type designation(s)  
**PA 6, PA 6 S and PA 12**

Issued to

**Flexa GmbH & Co. Produktion und Vertrieb KG**  
**Hanau, Hessen, Germany**

is found to comply with

**DNV GL 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 GL.**

Issued at **Hamburg** on **2021-06-21**

for **DNV**

This Certificate is valid until **2026-06-20**.

DNV local station: **Augsburg**

Approval Engineer: **Carsten Hunsalz**

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**Arne Schaarmann**  
**Head of Section**

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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.  
 Corrugated tubing of various colours made from Polyamid 6 and PA 12.

Classification of Conduits according to IEC 61386-23:2002 / EN 61386-23:2004 + A11:2010

Item	Classification according to:	PA 6	PA 6 S	PA 12
	Sizes Outer diameter (mm)	10,0 - 54,5	10,0 - 54,5	10,0 - 54,5
6.1.1	Resistance to compression	Light / Medium	Light / Medium	Very Light / Light
6.1.2	Resistance to impact	Medium / Heavy	Medium / Heavy	Very Light / Light
6.1.3	Resistance to bending	Flexible	Flexible	Flexible
6.1.4	Tensile strength	Very Light / Light / Medium	Very Light / Light / Medium	Very Light / Light
6.1.5	Suspended load capacity	Light / Medium	Light / Medium	Very Light / Light
6.2.1	Lower temperature range (Transport, installation and application not lower than)	-5 °C	-25 °C	-45 °C
6.2.2	Upper temperature range (Transport, installation and application no more than)	+120 °C	+120 °C	+120 °C
6.3	According to electrical characteristics	Not tested	Not tested	Not tested
6.4	According to resistance to external influences:	IP67	IP67	IP67
6.5	According to resistance to flame propagation	Non-flame propagation	Non-flame propagation	Non-flame propagation

## Application/Limitation

For use as wire support and protection inside cabinets. 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.

When exposed to sunlight, Ultra-Violet resistant type must be specified.

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

## Type Approval documentation

### Technical info:

Flexa catalogue Revision B4 Nov 2013, Revision D1 Jun 2014, Revision C2 Nov 2013

### Test reports:

VDE test report IEC61386-23 Part 2-3 Ref.no 598500-5410-0023-108073 dated 2008-09-04

VDE test report IEC61386-23 Part 2-3 Ref.no 598500-5410-0023-108073 dated 02.05.2005

VDE test report Ref.no 598500-5410-0004 / 184381 Certificate no. 103707 dated 2013-07-03

VDE test report Ref.no 598500-5410-0023 / 184380 Certificate no. 116819 dated 2013-07-11

VDE test report Ref.no 598500-5410-0023 / 184380 Certificate no. 40014272 dated 2013-07-12

VDE test report Ref.no 598500-5410-0023 / 236303 Certificate no. 116819 dated 2018-03-13

VDE test report Ref.no 598500-5410-0004 / 253741 Certificate no. 103707 dated 2019-03-15

## Tests carried out

Type tests in accordance with DIN EN IEC 61386-23. Resistance to flame propagation.

## Marking of product

FLEXA - Type - Size - Ref. no.

## Periodical assessment



Job Id: **262.1-003126-5**  
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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