



Certificate no.:
TAE00004W8

TYPE APPROVAL CERTIFICATE

This is to certify:

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

with type designation(s)

BraceConduit: BCAB-L-(x)-(y), BraceConduitClip: BCC-(x)-(y), BraceFitting: E(b)BFS(d)-(e)-(f)-(g)

issued to

WISKA Hoppmann GmbH
Kaltenkirchen, 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 **2024-06-07**

This Certificate is valid until **2029-06-06**.

for **DNV**

DNV local unit: **Hamburg – CMC North/East**

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

Type:	BraceConduit: BCAB-L-(x)-(y)
Material:	Polyamide 6 (PA6)
Temperature range:	-5°C to +105°C +5°C to +105°C Sizes "36", "48"
Nominal dimension:	"12", "14", "17", "23", "29", "36", "48"

Series: BraceConduit: BCAB-L-(x)-(y): (x)= Two digit for the size of the BraceConduit
 (y) = Two digit for the color of the BraceConduit

Details according to manufacturer's specification

Classification according to IEC 61386-1 Annex A and IEC 61386-23

6.1.1 Resistance to compression	1	Very light
6.1.2 Resistance to impact	2	Light
6.2.1 Lower temperature range	2 (1)	-5°C (+5°C Sizes "36", "48")
6.2.2 Upper temperature range	3	+105°C
6.1.3 Resistance to bending	4	Flexible
6.3 Electrical characteristics	0	None declared
6.4.1 Protection against ingress of solid objects	6	Dust-tight
6.4.2 Protection against ingress of water	7	Protected against the effects of temporary immersion in water
6.4.3 Resistance against corrosion	0	None declared
6.1.4 Tensile strength	1	Very light
6.5 Resistance to flame propagation	1	Non-flame propagating
6.1.5 Suspended load capacity	0	None declared
6.6.1 Fire aftereffect	0	None declared
6.6.2 Environmental influences	1	Halogen free

Type:	BraceConduitClip: BCC-(x)-(y)
Material:	Polyamide 6 (PA6)
Temperature range:	-15°C to +105°C
Nominal dimension:	"07", "10", "12", "14", "17", "23", "29", "36", "48"

Series: BraceConduitClip: BCC-(x)-(y): (x)= Two digit for the size of the BraceConduitClips
 (y) = Two digit for the color of the BraceConduitClips

Details according to manufacturer's specification

Classification according to IEC 61386-1 Annex A and IEC 61386-25

6.1.101 Resistance to lateral load	4	Heavy
6.1.2 Resistance to impact	1 (2)	Very Light (Light "12", "14", "17", "29")
6.2.1 Lower temperature range	3	-15°C
6.2.2 Upper temperature range	3	+105°C
6.4.3 Resistance against corrosion	0	None declared
6.5 Resistance to flame propagation	1	Non-flame propagating
6.1.102 Resistance to axial load	1	As declared by the manufacturer

BraceFitting Type EBFS, EMBFS, EMBFSI

E(b)BFS(d)-(e)-(f)-(g)

(b) = Maximum two digit for the kind of the material of the thread

Without indication = plastic thread

"M" = brass nickel plated thread

d) = Location of the thread (maximum one digit)

Without indication = External thread

"I" = Internal thread

(e) = Two digit for the nominal size of the BraceFitting

Nominal width = "12", "14", "17", "23", "29", "36", "48"

(f) = Thread size (maximum five digit)

Metric type: "12", "16", "20", "25", "32", "40", "50" or "63"

(g) = Two digit for the color of the BraceFitting

Application/Limitation

For use as wire support and protection inside cabinets. When used outside cabinets, the corrugated tubes give added protection to cables – not wires. Corrugated tubes with wires are not substitutes for cables.

To be installed according with the manufacturer's instructions and DNV rules.

Type Approval documentation

Tests carried out

IEC 61386-1:2008 + A1:2017 and IEC 61386-23:2021 and IEC 61386-25:2011

Protection class test on corrugated conduit fitting: DIN EN 60529 (VDE 470 Teil 1):2014-09

Vibration test according: DIN EN 61373:2011

Marking of product

Manufacturer - Type designation - 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