

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-13/0695
of 7 April 2020

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

"Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre,
Typ KT"

Product family
to which the construction product belongs

construction product for use in penetration seals

Manufacturer

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12-17
74653 Künzelsau
DEUTSCHLAND

Manufacturing plant

Werk 14

This European Technical Assessment
contains

13 pages including 9 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 350454-00-1104

This version replaces

ETA-13/0695 issued on 29 March 2018

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Specific part

1 Technical description of the product

The construction products consist of PVC-U half-pipes and an inlay made of an intumescent material which expands under heat exposure.

- In the case of the construction product "Würth Kabel-Röhre, Typ KR", design variant 1, two half-pipes are joined by means of a click fastener to form a pipe sleeve. The inlay is bonded into the half-pipes (see Annex 3).
- In the case of the construction product "Würth Kabel-Röhre, Typ KR", design variant 2, two half-pipes are joined by means of a fastener taking the shape of an H profile to form a pipe sleeve. The half-pipes are coated with the inlay (see Annex 3).
- The construction product "Würth Kabel-Röhre, Typ KT" consists of a half-pipe. The inlay is bonded into the half-pipe. The inlay overlaps the half-pipe by about the half-pipe's diameter. This overlap is used to form the bottom (see Annex 4).

A detailed technical description (e.g. dimensions) and fire safety related performance criteria for the construction products are given in Annexes 1 to 4. Detailed information on the construction products' components are deposited with Deutsches Institut für Bautechnik.

NOTE:

The characteristics listed are suitable both for identifying the construction products as well as for performing the manufacturer's factory production control.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The construction products "Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT" shall be used as part of cable penetration seals.

Cable penetration seals are used to seal openings in fire-resistant walls or floors, which are penetrated by cables. Their aim is to preserve the walls' or floors' fire resistance in the area of the penetrations.

Within the framework of this ETA, the fire resistance was demonstrated for cable penetration seals consisting of two half-pipes of the type "Würth Kabel-Röhre, Typ KR" (for floor and wall installations) and for cable penetration seals consisting of one half-pipe of the type "Würth Kabel-Röhre, Typ KT" (for wall installations).

The cable penetration seals had a closure made of a flexible foam on both sides for "Würth Kabel-Röhre, Typ KR" pipe sleeves or one side for "Würth Kabel-Röhre, Typ KT" half-pipes.

After inserting the foam into the remaining openings, this closure was sealed from the outside with an ablative fire stopping product.

In addition, the joints between the pipe sleeve or the half-pipe and the surrounding component were sealed.

More detailed information and data on the verified cable penetration seals are given in annexes 5 to 9.

The construction product "Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT" may be used for cable penetration seals of use category X (outdoor use – rain, UV light, frost) provided that the other components of the cable penetration seal, which are not the subject of this ETA, meet the durability requirements. The resistance to fire of the cable penetration seals shall be verified on a case-by case basis.

The performances given in Section 3 apply exclusively to the cable penetration seals assessed as part of the ETA procedure (e.g. with respect to the design and arrangement of the cable penetration seals' components as well as the type and position of the services).

3 Performance of the product and references to the methods used for its assessment

3.1 Intended use: use in penetration seals

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire "Half-pipe"	Class E according to EN 13501-1
Reaction to fire "Inlay" for "Würth Kabel-Röhre, Typ KR", design variant 1 and "Würth Kabel-Röhre, Typ KT"	Class E according to EN 13501-1
Reaction to fire "Inlay" for "Würth Kabel-Röhre, Typ KR", design variant 2	Class B-s1, d0 according EN 13501-1
Resistance to fire of a cable penetration seal containing the product	The resistance to fire depends on the design and installation of the cable penetration seal and on the other components that make up the cable penetration seal. More details on the tested cable penetration seals and the related fire resistance classes are given in Annexes 1 to 9.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with European Assessment Document (EAD) no. 350454-00-1104, the following legal base shall apply: 1999/454/EC.

The system to be applied is: system 1.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 7 April 2020 by Deutsches Institut für Bautechnik

Maja Tiemann
Head of Department

beglaubigt:
Bisemeier

The factory manufactured construction products "Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT" consist of PVC-U half-pipes and an inlay made of an intumescent material. They are used for cable penetration seals.

Properties and performance criteria of the components of the construction products "Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT"

Component	Description
"Half-pipe" (with glued groove bar or click fastener)	Dimensions: Ø = 60 mm, 90 mm, 116,4; s = 3,2 mm (depending on the version); l = 150 mm, 200 mm or 300 mm Material: PVC-U according to EN 1452
"Inlay" for "Würth Kabel-Röhre, Typ KR", design variant 1 and "Würth Kabel-Röhre, Typ KT"	Thickness = 1,5 mm (dry layer thickness) Material: intumescent material* Classification of fire behavior according to EN 13501-1: E
"Inlay" for "Würth Kabel-Röhre, Typ KR", design variant 2	Thickness = 1,5 mm (dry layer thickness) Material: intumescent material* Classification of fire behavior according to EN 13501-1: B-s1, d0

The properties listed can be used both for the identification of the construction product and for the implementation of the factory production control of the manufacturer.

Implementation details for the factory production control are included in the inspection plan.

*The composition of the materials is deposited at DIBt.

Description of the additional ingredients of the tested cable penetration seals

"Closure" (for closing the pipe sleeve)	Thickness = 40 mm; diameter corresponding to the pipe diameter; Material: flexible foam of the type "Basotect" or "Basotect G" der Fa. BASF AG Classification of fire behavior acc. to EN 13501-1: C-s1, d0
"Sealing"	Thickness ≥ 0,5 mm (dry layer thickness) Material: ablative coating material "Würth Ablationsbeschichtung I" acc. to declaration of performance No. LE_0893305755_00_S_Ablationsbeschichtung I of 31.10.2018 Classification of fire behavior according to EN 13501-1: E
50 mm thick mineral wood plates	"Rockwool Hardrock 040" Deutsche Rockwool Mineralwoll GmbH, 45866 Gladbeck, Germany; acc. to EN 13162 Classification of fire behavior acc. to EN 13501-1: A1
Mineral wool	"Rockwool Lose Wolle RL"; Deutsche Rockwool Mineralwoll GmbH, 45866 Gladbeck, Germany; acc. to EN 14303 Classification of fire behavior acc. to EN 13501-1: Class A1
32 mm thick system floor plates	"GIFAfloor FHB" Knauf Classification of fire behavior acc. to EN 13501-1: A1
Closure of the residual joint	"Würth Brandschutzzement MG III" acc. to EN 998-2 Classification of fire behaviour acc. to EN 13501-1: A1
Closure of the residual joint	„Würth Brandschutzmörtel“ Acc. to allgemeiner bauaufsichtlicher Zulassung No. Z-19.15-1333
Kabelwickel	Thickness = 1,5 mm; width = 125 mm "Brandschutzgewebe DBU" acc. to declaration of performance No. LE_0893305755_00_S_Ablationsbeschichtung I of 31.10.2018 Classification of fire behavior acc. to EN 13501-1: Class B-s1,d0

"Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT"

Description of the construction products, properties and performances

Annex 1

Performance of cable penetration seals, tested with the construction product "Würth Kabel-Röhre, Typ KR" or "Würth Kabel-Röhre, Typ KT"

	Essential requirement	Test method	Construction of the sample	Performance acc. EN 13501-2
1	Resistance to fire	EN 1366-3	Cable penetration seal containing the product "Würth Kabel-Röhre, Typ KR" used in a 100 mm thick flexible wall; design and layout of the penetration seal acc. to annex 6*	EI 90
2	Resistance to fire	EN 1366-3	Cable penetration seal containing the product "Würth Kabel-Röhre, Typ KR" used in a 150 mm thick rigid floor; design and layout of the penetration seal acc. to annex 6*	EI 120
3	Resistance to fire	EN 1366-3	Cable penetration seal containing the product "Würth Kabel-Röhre, Typ KR" used in a 100 mm thick flexible wall; design and layout of the penetration seal acc. to annex 7*	EI 90
4	Resistance to fire	EN 1366-3	Cable penetration seal containing the product "Würth Kabel-Röhre, Typ KR" used in a 150 mm thick rigid floor; design and layout of the penetration seal acc. to annex 7*	EI 90
5	Resistance to fire	EN 1366-3	Cable penetration seal containing the product "Würth Kabel-Röhre, Typ KT"; design and layout of the penetration seal acc. to annex 9*	EI 90 resp. EI 120

The tested/ illustrated cable penetration seals are only examples for the use.

The illustrations are without guarantee for completeness.

The use of the construction products "Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT" in cable penetration seals shall be in accordance with national requirements for planning, design and execution and in accordance with the installation instruction of the manufacturer.

"Würth Kabel-Röhre, Typ KR" and "Würth Kabel-Röhre, Typ KT"

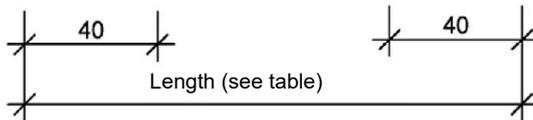
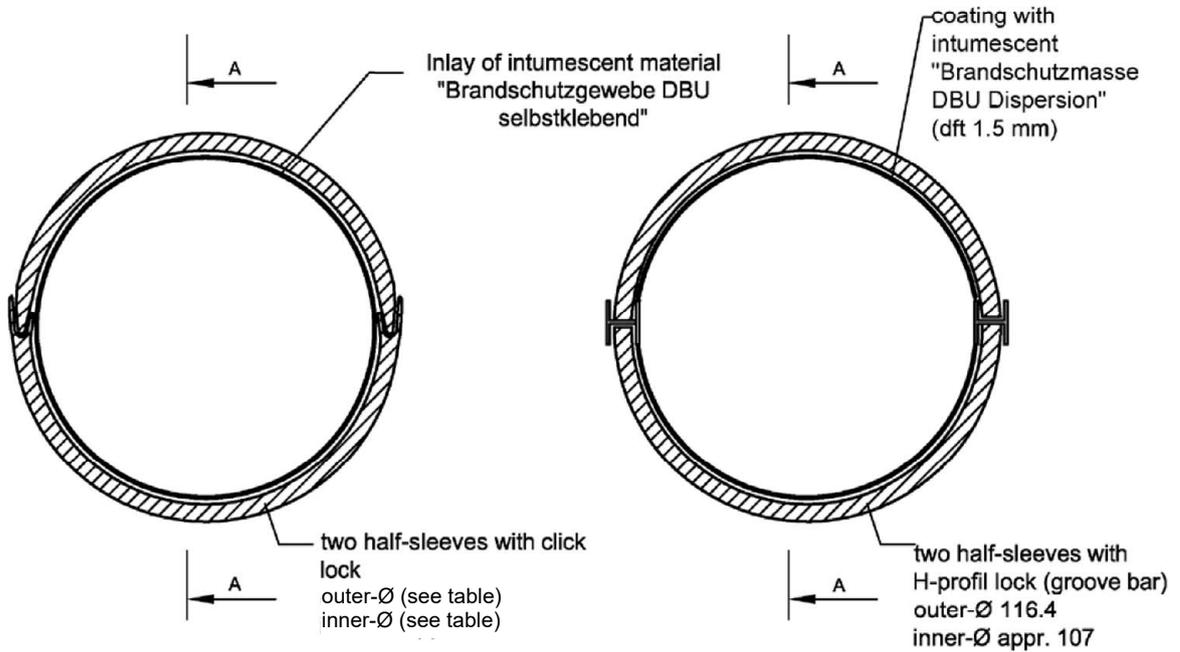
Description of the construction products, properties and performances

Annex 2

English translation prepared by DIBt

"Würth Kabel-Röhre, Typ KR"
version 1

"Würth Kabel-Röhre, Typ KR"
version 2



Ø _{outer} [mm]	Ø _{inner} [mm]	L Pipesleeve [mm]
60	50,6	150
		150
90	80,6	200
		300
		300
116,4	107	150
		200
		300

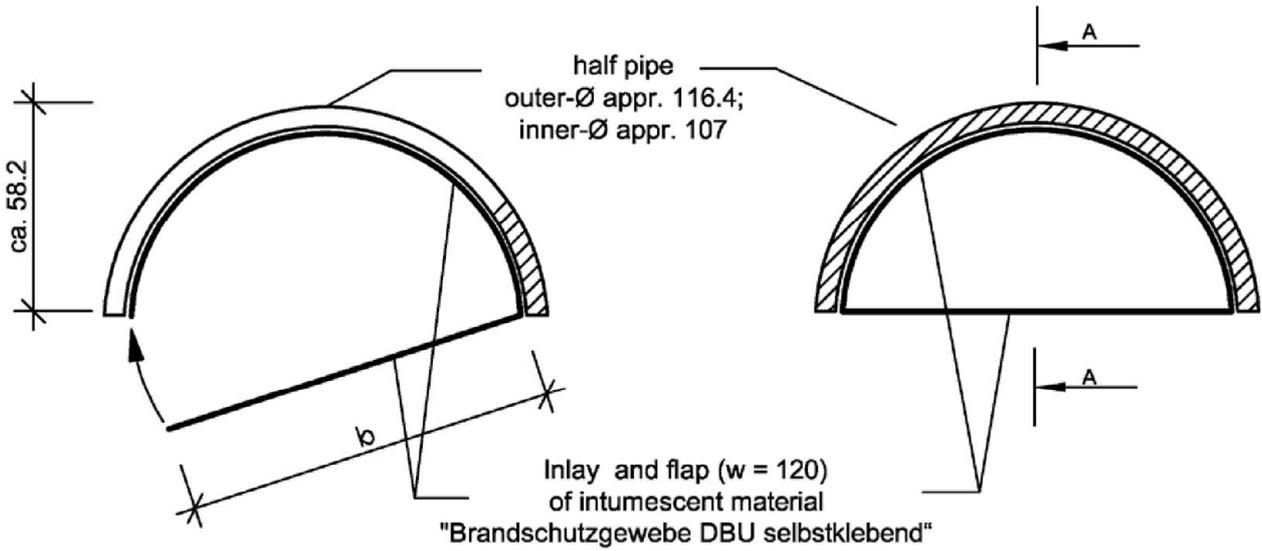
dimensions in mm

"Würth Kabel-Röhre, Typ KR" and "Würth-Kabelröhre, Typ KT"

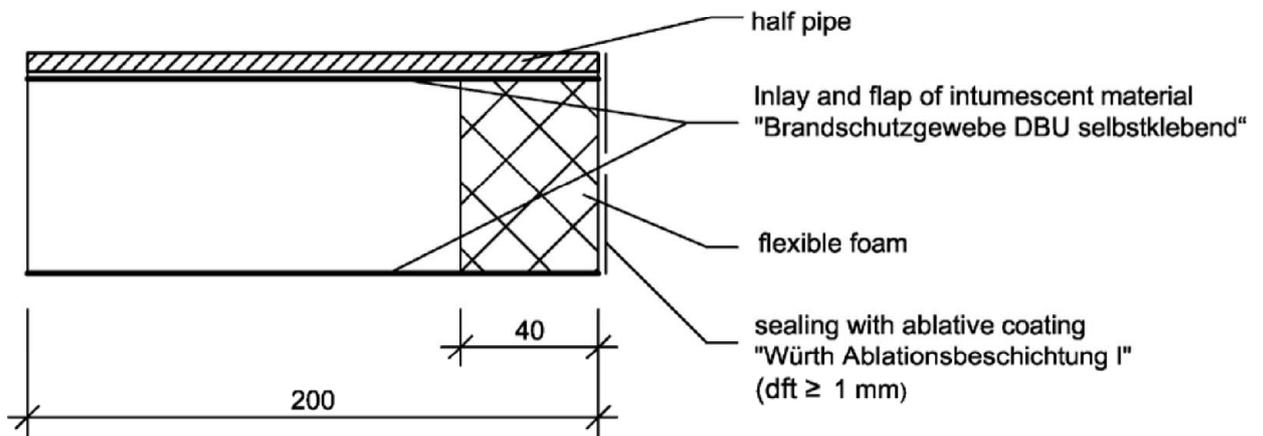
Construction of pipe sleeve "Würth Kabel-Röhre, Typ KR", variants 1 and 2

Annex 3

"Würth Kabel-Röhre, Typ KT"



section view A - A (installed)



closing and sealing are needed on one side only!

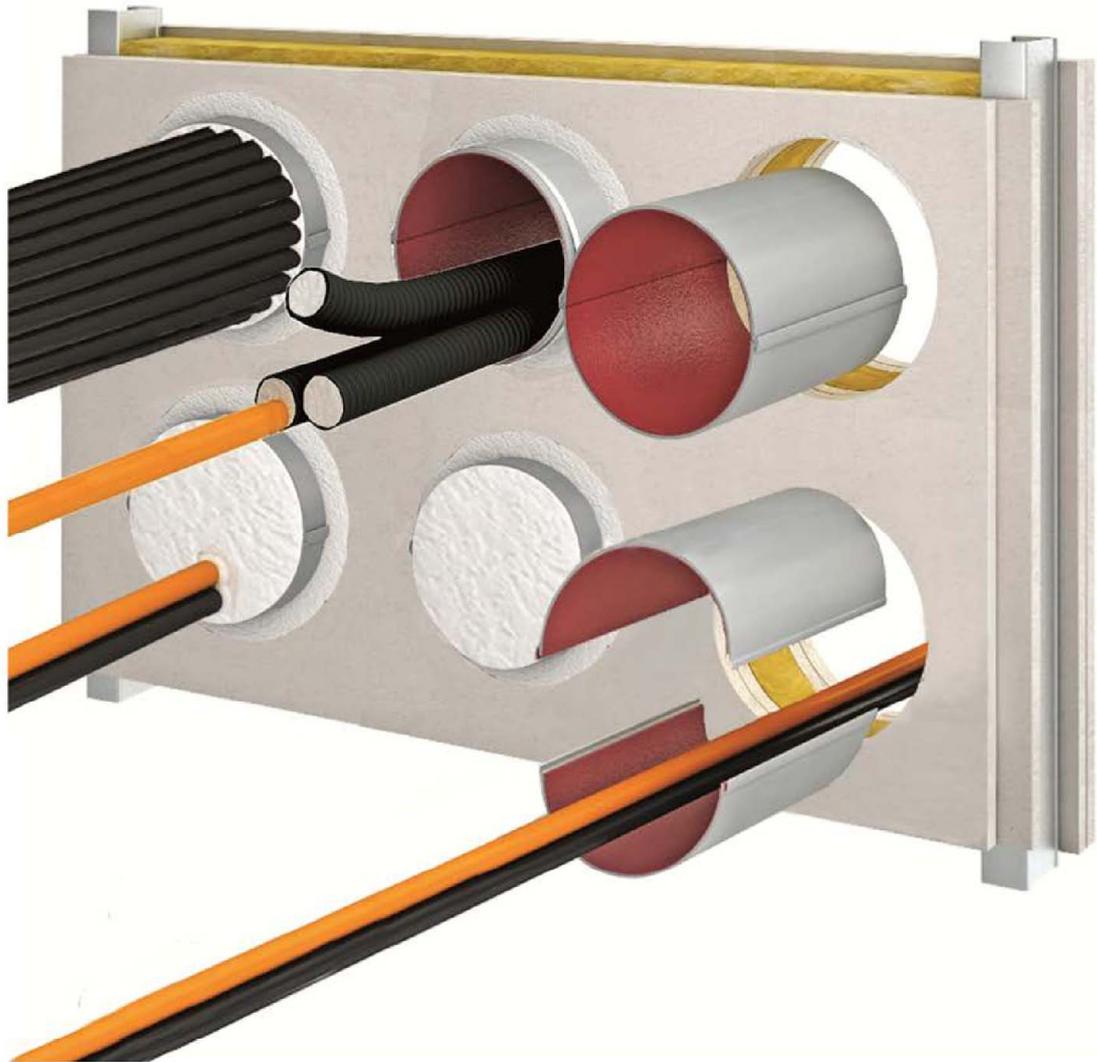
dimensions in mm

"Würth Kabel-Röhre, Typ KR" and "Würth-Kabelröhre, Typ KT"

Construction of pipe sleeve "Würth Kabel-Röhre, Typ KT"

Annex 4

"Würth Kabel-Röhre, Typ KR"

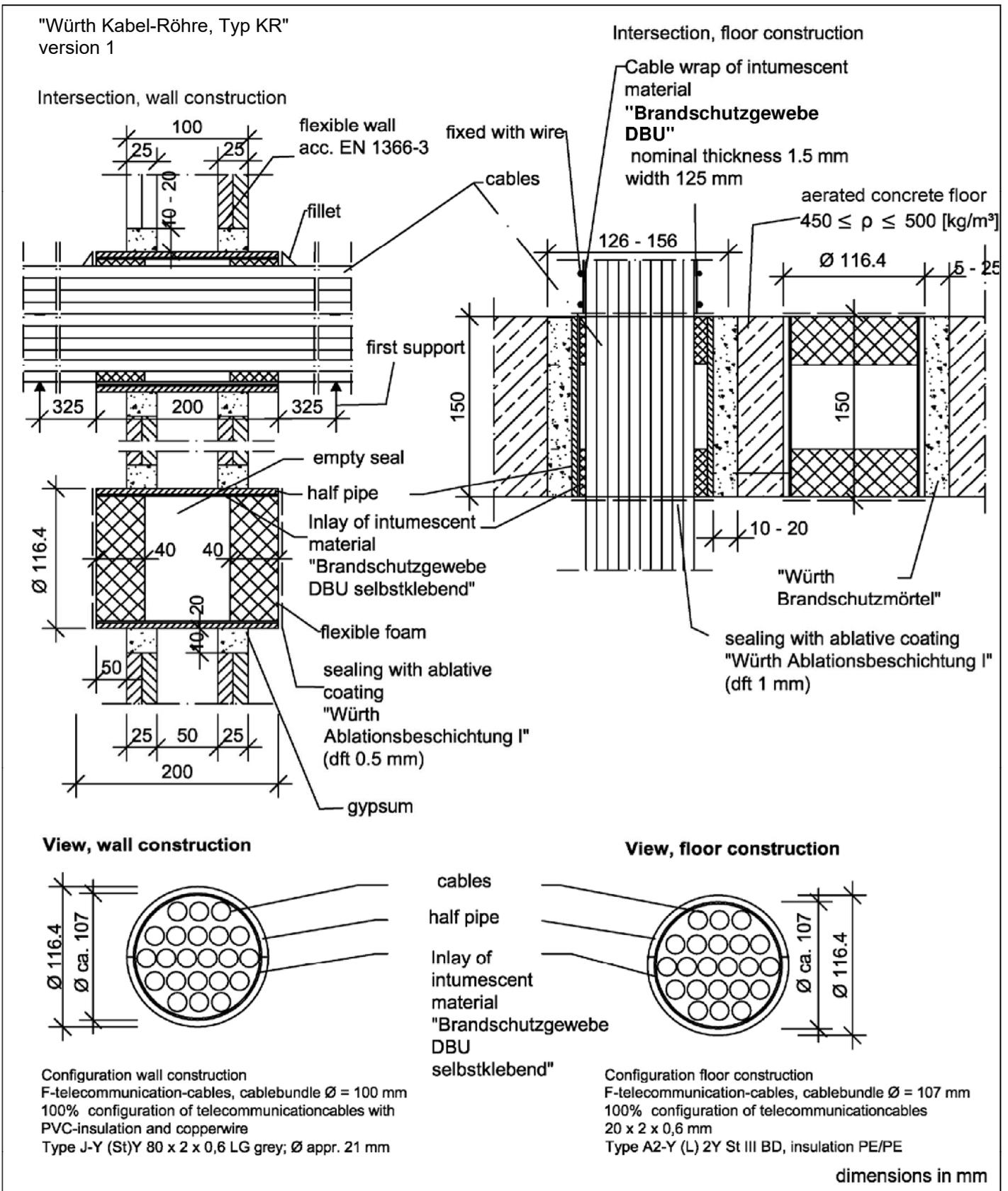


"Würth Kabel-Röhre, Typ KR" and "Würth-Kabelröhre, Typ KT"

Schematic representation of the built-in pipe sleeves type "Würth Kabel-Röhre, Typ KR"

Annex 5

English translation prepared by DIBt



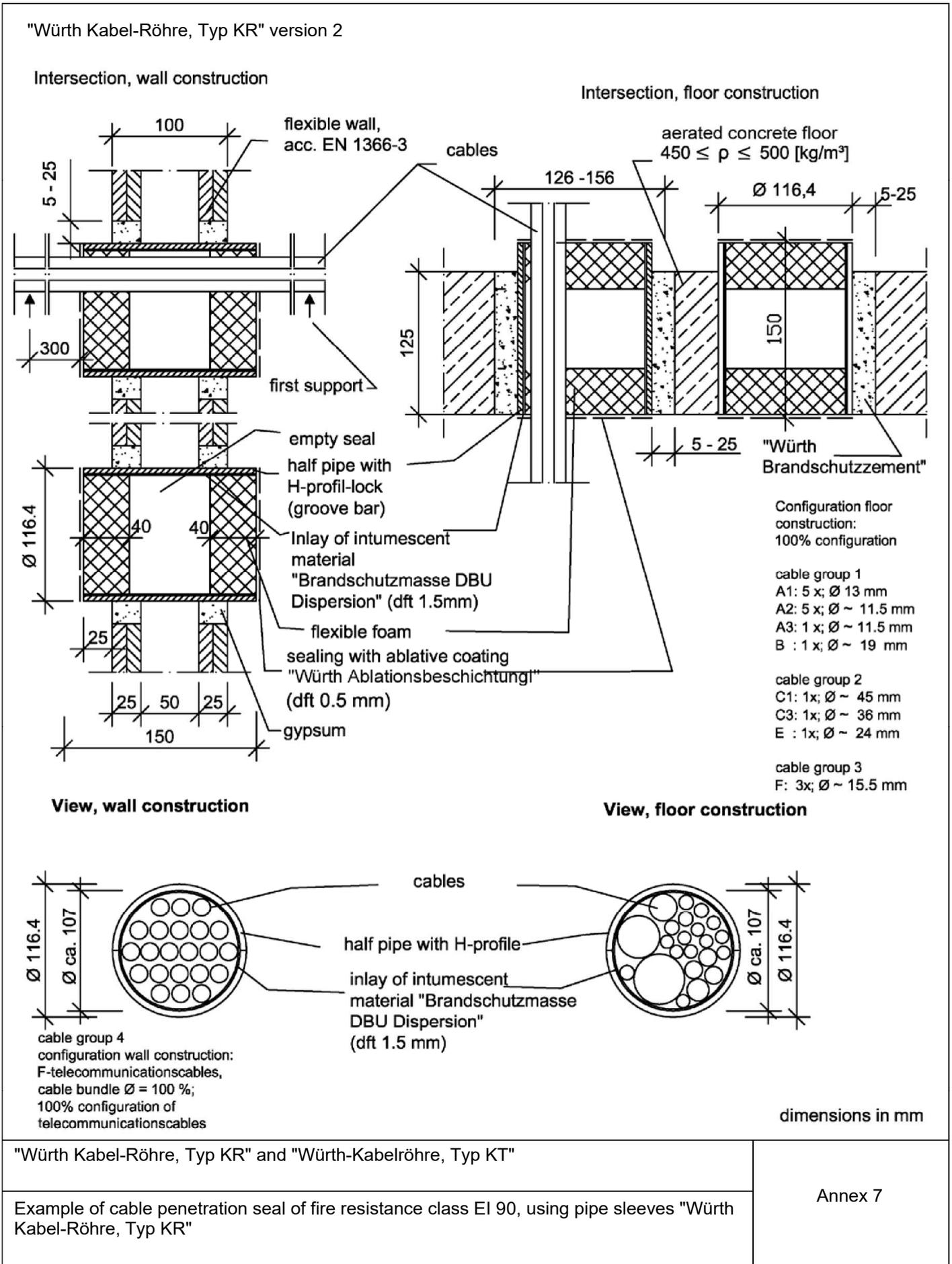
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"Würth Kabel-Röhre, Typ KR" and "Würth-Kabelröhre, Typ KT"

Example for cable seals of fire resistance class EI 90 (wall) and EI 120 (floor), using the pipe sleeve "Würth Kabel-Röhre, Typ KR"

Annex 6

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Halfpipe "Würth Kabel-Röhre, Typ KT"
version 2

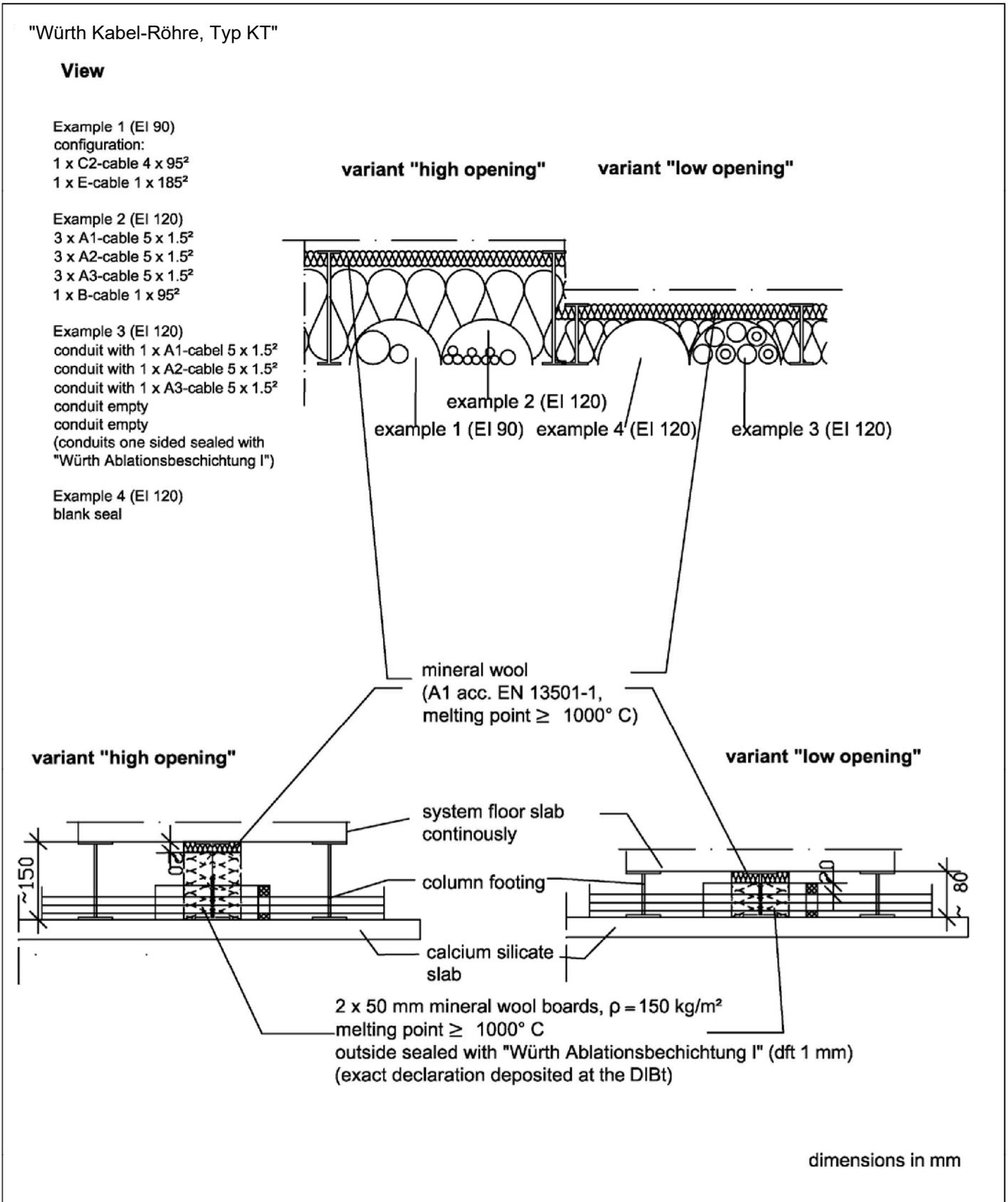


"Würth Kabel-Röhre, Typ KR" and "Würth-Kabelröhre, Typ KT"

Schematic representation of the built-in pipe sleeves type "Würth Kabel-Röhre, Typ KT"

Annex 8

English translation prepared by DIBt



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<p>"Würth Kabel-Röhre, Typ KR" and "Würth-Kabelröhre, Typ KT"</p>	<p>Annex 9</p>
<p>Example of penetration seas of fire resistance EI 90 resp. EI 120, using the pipe sleeves "Würth Kabel-Röhre, Typ KT"</p>	