Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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European Technical Assessment ETA-18/0548 of 20 November 2025

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	frame fixing URDL
Product family to which the construction product belongs	Plastic anchor for redundant non-structural systems in concrete and masonry
Manufacturer	Upat Vertriebs GmbH Bebelstraße 11 79108 Freiburg im Breisgau DEUTSCHLAND
Manufacturing plant	manufacturing plant 1
This European Technical Assessment contains	16 pages including 3 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 330284-00-0604, edition 12/2020
This version replaces	ETA-18/0548 issued on 28 August 2018

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Specific Part

1 Technical description of the product

The frame fixing URDL is a plastic anchor consisting of a plastic sleeve made of polyamide and an accompanying specific screw of galvanised steel or of stainless steel.

The plastic sleeve is expanded by screwing in the specific screw which presses the sleeve against the wall of the drilled hole.

The product description is given in Annex A.

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

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchors of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	See Annex C 1

3.2 Mechanical resistance and stability (BWR 4)

Essential characteristic	Performance
Resistance to steel failure under tension loading	See Annex C 1
Resistance to steel failure under shear loading	See Annex C 1
Resistance to pull-out or concrete failure under tension loading (base material group a)	See Annex C 1
Resistance in any load direction without lever arm (base material group b, c, d)	See Annexes C 3 and C 5
Edge distance and spacing (base material group a)	See Annex B 2
Edge distance and spacing (base material group b, c, d)	See Annex B 3
Displacements under short-term and long-term loading	See Annex C 2
Durability	See Annex B 1

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

In accordance with European Assessment Document EAD 330284-00-0604 the applicable European legal act is: 97/463/EC.

The system to be applied is: 2+

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.

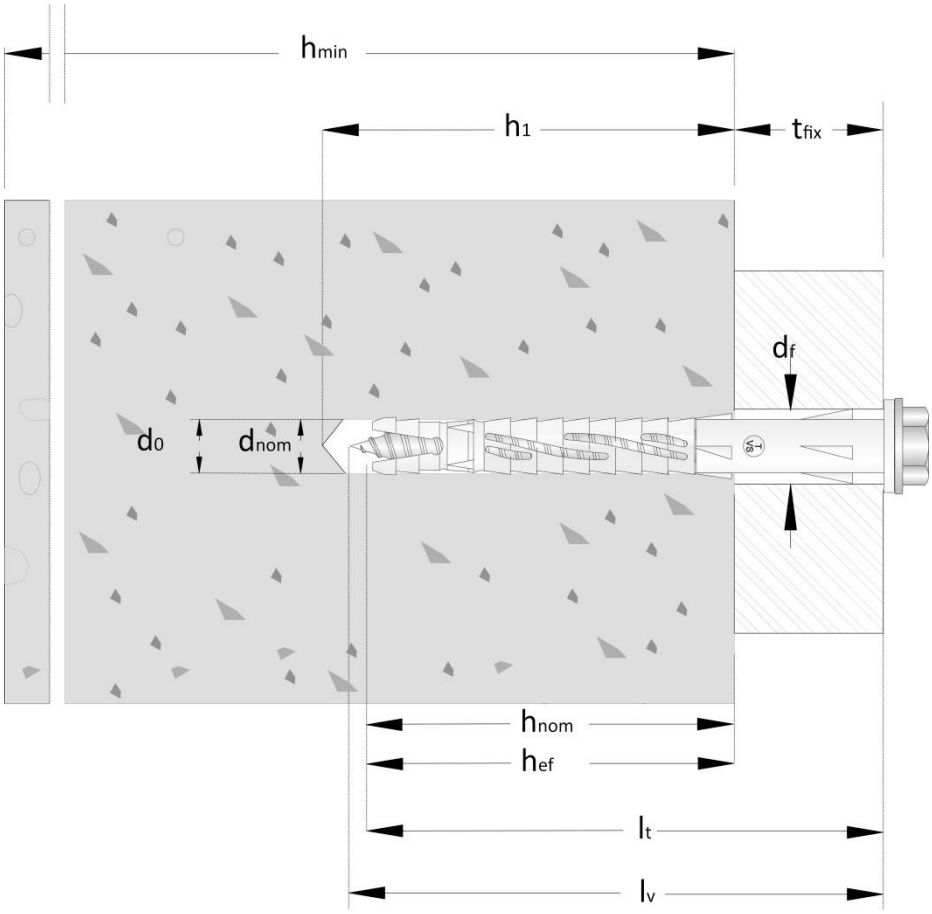
Issued in Berlin on 20 November 2025 by Deutsches Institut für Bautechnik

Dipl.-Ing. Beatrix Wittstock
Head of Section

beglaubigt:
Ziegler

Deutsches Institut für Bautechnik DIBt

URDL



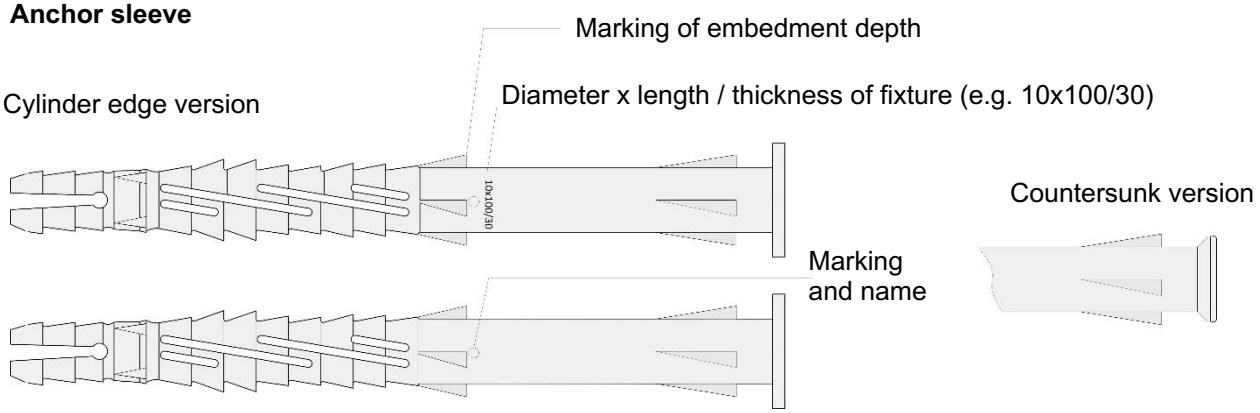
Legend

$h_{nom} \triangleq h_{ef}$	=	Overall plastic anchor embedment depth in the base material
h_1	=	Depth of drill hole to deepest point
h_{min}	=	Minimum thickness of member (wall)
t_{fix}	=	Thickness of fixture and / or non-load bearing layer
l_t	=	Anchor length
l_v	=	Screw length
d_0	=	Drill hole diameter
d_f	=	Diameter of clearance hole in the fixture
d_{nom}	=	Nominal anchor diameter

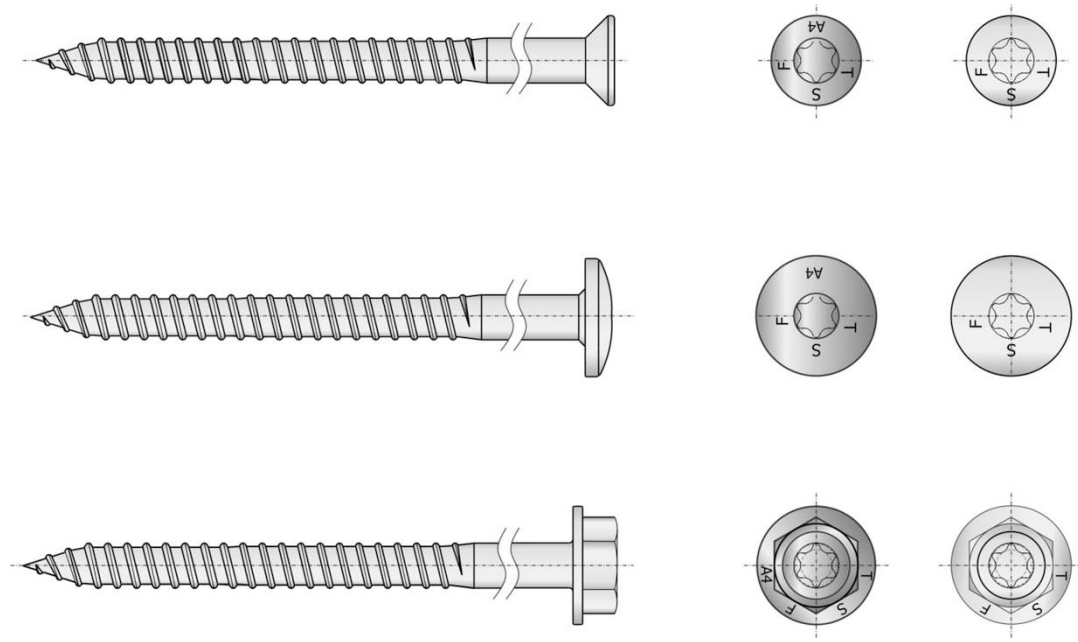
Figures not to scale

frame fixing URDL	**Annex A 1**
Product description Installed anchor	

Anchor sleeve



Special screw (galvanized steel and stainless steel - A4)



Figures not to scale

frame fixing URDL	**Annex A 2**
Product description Anchor types / special screw – Marking and sizes	

Table A3.1: Dimensions

Anchor type	Anchor sleeve						Special screw	
	h_{nom} [mm]	Ø d_{nom} [mm]	t_{fix} [mm]	min. l_d [mm]	max. l_d [mm]	Ø d_{Sf} [mm]	Ø d_s [mm]	l_s [mm]
URDL 8	**70**	**8**	**≥ 10**	**≥ 80**	**360**	**> 14,5**	**6,0**	**≥ 85**
URDL 10		**10**	**≥ 10**	**≥ 80**	**360**	**> 17,5**	**7,0**	**≥ 85**

Table A3.2: Materials

Name	Material
Anchor sleeve	Polyamide, PA6, colour: grey off-white
Galvanized screw	Zinc plated carbon steel (property class 5.8), Zinc layer thickness minimum 5 µm according to ISO 4042:2022 (hereinafter designated as "zinc plated carbon steel")
Stainless steel screw	Stainless steel "A4/70" according to ISO 3506-1:2020 and EN 10088-3:2023 Corrosion resistance class CRC III according to EN 1993-1-4:2006+A1:2015

frame fixing URDL	**Annex A 3**
Product description Dimensions / Materials	

Specifications of intended use

Anchorages subject to:

- Static and quasi-static loads.
- Multiple fixing of non-structural applications.

Base materials:

- Compacted, reinforced or unreinforced normal weight without fibres with strength classes ≥ C16/20 (base material group a), according to EN 206:2013+A2:2021. See Annex C1.
- Solid brick masonry (base material group b) see Annex C2.
  Note: The characteristic resistance is also valid for larger brick sizes and larger compressive strength of the masonry unit.
- Hollow or perforated brick masonry (base material group c) see Annex C3 and C4.
- Autoclaved aerated concrete (base material group d) see Annex C9.
- Mortar strength class of the masonry ≥ M2,5 according to EN 998-2:2016.
- For other base materials of the base material group a, b, c or d the characteristic resistance of the anchor may be determined by job site tests according to EOTA TR 051:2018-04.

Temperature range:

- a: - 40 °C to 40 °C (max. short term temperature + 40 °C and max long term temperature + 24 °C)
- b: - 40 °C to 80 °C (max. short term temperature + 80 °C and max long term temperature + 50 °C)

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions (zinc plated carbon steel screws / stainless steel screws)
- The specific screw made of zinc plated carbon steel may also be used in structures subject to external atmospheric exposure, if the area of the head of the screw is protected against moisture and driving rain after mounting of the fixing unit in this way, that intrusion of moisture into the anchor shaft is prevented. Therefore there shall be an external cladding or a ventilated rainscreen mounted in front of the head of the screw and the head of the screw itself shall be coated with a soft plastic, permanently elastic bitumen-oil-combination coating (e. g. undercoating or body cavity protection for cars).
- Structures subject to external atmospheric exposure (including industrial and marine environment) and to permanently damp internal condition, if no particular aggressive conditions exist: stainless steel screws.
  Note: Particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plants or road tunnels where de-icing materials are used).

Design:

- The anchorages are designed in accordance with EOTA TR 064:2022-12 under the responsibility of an engineer experienced in anchorages and masonry work.
- Verifiable calculation notes and drawings shall be prepared taking account of the loads to be anchored, the nature and strength of the base materials and the dimensions of the anchorage members as well as of the relevant tolerances. The position of the anchor is indicated on the design drawings.

Installation:

- Hole drilling by the drill modes according to Annex C1, C3, C5.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation temperature ≥ 0 °C.
- Exposure to UV due to solar radiation of the anchor not protected by e.g. plaster ≤ 6 weeks.
- No ingress of water in the core hole < 0 °C.

frame fixing URDL	**Annex B 1**
Intended use Specifications	

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Table B2.1: Installation parameter

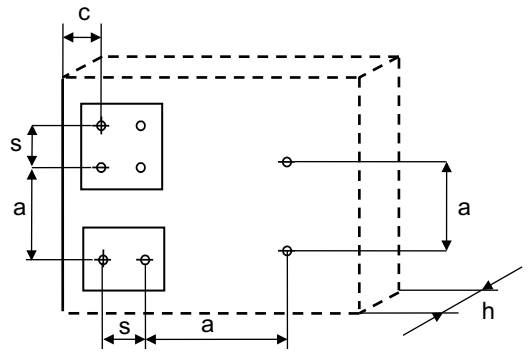
Anchor type				**URDL 8**	**URDL 10**
Nominal drill hole diameter	d_0	=	[mm]	8	10
Cutting diameter of drill bit	d_{cut}	≤	[mm]	8,45	10,45
Overall plastic anchor embedment depth in the base material	$h_{ef} = h_{nom}$	≥	[mm]	70	70
Depth of drill hole to deepest point	h_1	≥	[mm]	90	90
Diameter of clearance hole in the fixture	d_f	≤	[mm]	9	11
Hexagon socket (ISO 10664:2014)	**T**		[-]	30	40
Wrench size (hexagon screw)	**SW**	=	[mm]	10	13

Table B2.2: Minimum thickness of member, edge distance and spacing in concrete

Anchor type	h_{nom} ≥ [mm]	**Concrete Strength class**	**Min. thickness of member** h_{min} [mm]	**Characteristic edge distance** $c_{cr,N}$ [mm]	**Characteristic spacing** $s_{cr,N}$ [mm]	**Minimum[1] edge distances** s_{min} [mm]	**Minimum spacing [1]** c_{min} [mm]
URDL 8	70	≥ C16/20	140	105	75	90	90
URDL 10	70	≥ C16/20	140	105	90	100	100

[1] Intermediate values by linear interpolation.

Scheme of distance and spacing in concrete



Fixing points with a spacing a ≤ $s_{cr,N}$ are considered as a group with a max. characteristic resistance $N_{Rk,p}$ according to Table C1.3. For a spacing a > $s_{cr,N}$ the anchors are considered as single anchors, each with a characteristic resistance $N_{Rk,p}$ according to Table C1.3.

Figure not to scale

frame fixing URDL	**Annex B 2**
Intended use Installation parameters, member thickness, edge distances and spacing in concrete Scheme of anchors in concrete	

Table B3.1: Minimum thickness of member, edge distance and spacing in masonry

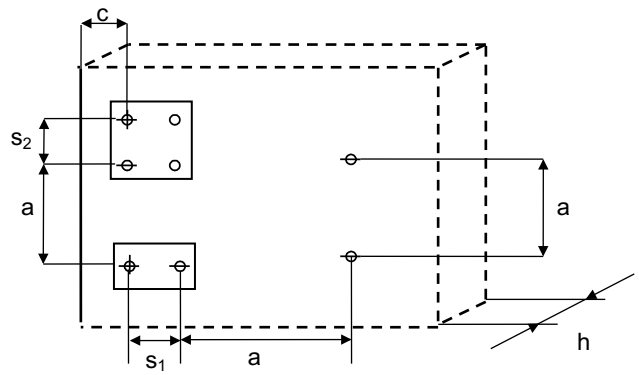
URDL 8 / URDL 10	Minimum member thickness	Minimum edge distances [1]	Spacing perpendicular to free edge	Spacing parallel to free edge	Minimum edge distance	Minimum distance between anchor groups and / or single anchors
Base material[1] according to Annex C3 – C4	h_{min} [mm]	c_{min} [mm]	$s_{1,min}$ [mm]	$s_{2,min}$ [mm]	c_{min} [mm]	a_{min} [mm]
		Single anchor	**Anchor group**			
Masonry TYPE A	110	120	240	480	120	250
Masonry TYPE B	120	125	250	500	125	
Masonry TYPE C	120	125	250	500	125	
Masonry TYPE D	120	125	250	500	75	
Masonry TYPE E	370	185	370	740	185	
Masonry TYPE F	240	120	240	480	120	
Masonry TYPE G	240	120	240	480	120	
Masonry TYPE H	115	120	240	480	120	
Masonry TYPE I	175	120	240	480	120	

[1] TYPE see Table C3.1 and C4.1.

Table B3.2: Minimum thickness of member, edge distance and spacing in autoclaved aerated concrete

URDL 8 / URDL 10	Minimum member thickness	Minimum edge distances [1]	Spacing perpendicular to free edge	Spacing parallel to free edge	Minimum edge distance
Base material	h_{min} [mm]	c_{min} [mm]	$s_{1,min}$ [mm]	$s_{2,min}$ [mm]	c_{min} [mm]
		Single anchor	**Anchor group**		
Autoclaved aerated concrete	240	120	240	480	120

Scheme of distance and spacing in masonry and autoclaved aerated concrete



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frame fixing URDL	**Annex B 3**
Intended use Member thickness, edge distances and spacing in concrete Scheme of anchors in masonry and autoclaved aerated concrete	

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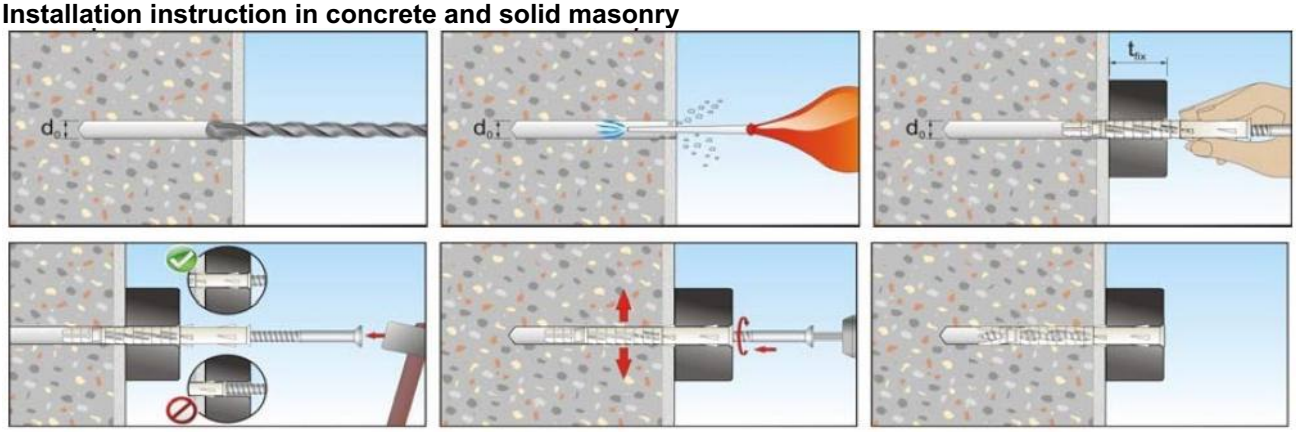
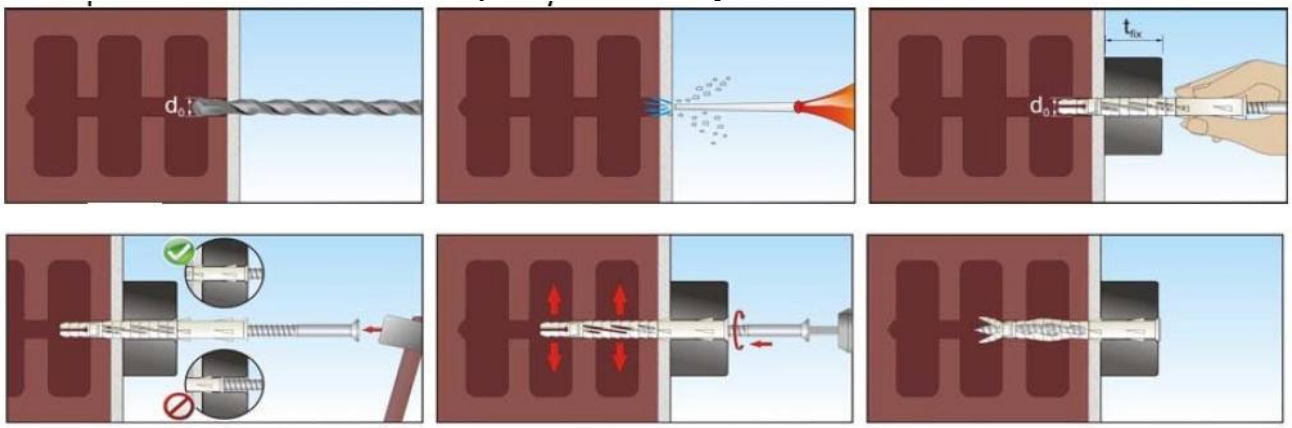
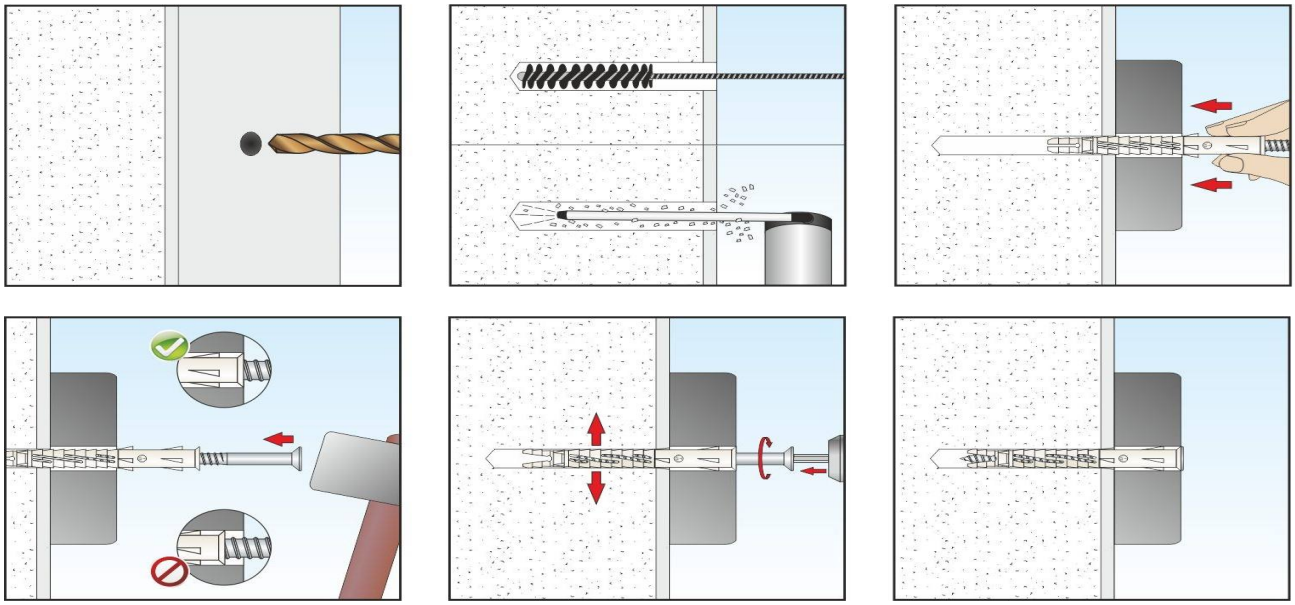
Installation instruction in concrete and solid masonry



Installation instruction in hollow- and perforated masonry



Installation in autoclaved aerated concrete



Figures not to scale

frame fixing URDL	**Annex B 4**
Intended use Installation instruction	

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Table C1.1: Characteristic bending resistance of the screw

Anchor type			**URDL 8**		**URDL 10**	
Material			Galvanized steel	Stainless steel	Galvanized steel	Stainless steel
Characteristic bending resistance	$M_{Rk,s}$	[Nm]	**12,1**	**16,9**	**19,3**	**27,1**
Partial safety factor	γ_{Ms} 1)	[-]	**1,25**			

1) In absence of other national regulations.

Table C1.2: Characteristic resistance of the screw

Versagen des Spreizelementes (Spezialschraube)			**URDL 8**		**URDL 10**	
			Galvanized steel	Stainless steel	Galvanized steel	Stainless steel
Characteristic tension resistance	$N_{Rk,s}$	[kN]	**11,3**	**15,8**	**15,4**	**21,6**
Partial safety factor	γ_{Ms} 1)	[-]	**1,5**			
Characteristic shear resistance	$V_{Rk,s}$	[kN]	**5,6**	**7,9**	**7,7**	**10,8**
Partial safety factor	γ_{Ms} 1)	[-]	**1,25**			

1) In absence of other national regulations.

Table C1.3: Characteristic resistance for use in concrete (base material group "a")

Pull-out failure (plastic sleeve)			**Drilling method** 1)	**URDL 8**	**URDL 10**
Anchorage depth h_{nom} [mm]				70	70
Concrete strength $f_{ck} \geq 16$ N/mm² (strength class C16/20 according to EN 206:2013+A2:2021)					
Characteristic tension resistance 24/40 °C	$N_{Rk,p}$	[kN]	**H**	**3,5**	**4,5**
Characteristic tension resistance 50/80 °C	$N_{Rk,p}$	[kN]	**H**	**3,0**	**4,0**
Partial safety factor	γ_{Mc} 2)	[-]	**1,8**		

1) Drilling mode: Hammer drilling.
2) In absence of other national regulations.

Table C1.4: Values under fire exposure in concrete C20/25 to C50/60 in any load direction, no permanent centric tension load, shear load without lever arm, fastening of façade systems

Anchor type	**Fire resistance class**	**$F_{Rk,fi90}$ 1) [kN]**	**$\gamma_{M,fi}$ 2) [-]**
URDL 10	**R 90**	≤ 0,8	1,0

1) F_{Rk} / (γ_M x γ_F).
2) In absence of other national regulations.

frame fixing URDL	**Annex C 1**
Performances Characteristic bending resistance of the screw, characteristic resistance of the screw Characteristic resistance for use in concrete, values under fire exposure	

Table C2.1: Displacements [2] under tension and shear loading in concrete and masonry

URDL 8	Tension load	Displacement under tension load [3]		Shear load	Displacement under shear load [3]	
Base material [1] according to Annex C3 – C4	**N** [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	**V** [kN]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
Beton C16/20	1,20	0,24	0,48	3,20	2,00	3,00
Masonry TYPE A	0,90	0,04	0,08	3,20	2,67	4,00
Masonry TYPE B	1,10	0,25	0,50	3,20	2,67	4,00
Masonry TYPE C	-	-	-	3,20	6,40	9,60
Masonry TYPE D	0,09	0,03	0,06	3,20	6,40	9,60
Masonry TYPE E	0,09	0,01	0,02	3,20	2,67	4,00
Masonry TYPE F	1,57	0,14	0,29	1,57	1,31	1,96
Masonry TYPE G	0,26	0,01	0,02	0,26	0,21	0,32
Masonry TYPE H	0,26	0,01	0,02	0,26	0,21	0,32
Masonry TYPE I	1,43	0,11	0,21	1,43	1,19	1,79

[1] TYPE see Table C3.1 and C4.1. [2] Valid for all ranges of temperature. [3] Intermediate values by linear interpolation.

Table C2.2: Displacements [2] under tension and shear loading in concrete and masonry

URDL 10	Tension load	Displacement under tension load [3]		Shear load	Displacement under shear load [3]	
Base material [1] according to Annex C3 – C4	**N** [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	**V** [kN]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
Beton C16/20	1,60	0,29	0,58	4,40	1,67	2,50
Masonry TYPE A	0,60	0,06	0,12	4,40	3,67	5,50
Masonry TYPE B	1,40	0,67	1,34	4,40	3,67	5,50
Masonry TYPE C	0,09	0,12	0,24	4,40	8,80	13,20
Masonry TYPE D	-	-	-	4,40	8,80	13,20
Masonry TYPE E	-	-	-	4,40	3,67	5,50
Masonry TYPE F	1,71	0,07	0,15	1,71	1,43	2,14
Masonry TYPE G	0,26	0,01	0,02	0,26	0,21	0,32
Masonry TYPE H	0,26	0,01	0,02	0,26	0,21	0,32
Masonry TYPE I	1,57	0,08	0,17	1,57	1,31	1,96

[1] TYPE see Table C3.1 and C4.1. [2] Valid for all ranges of temperature. [3] Intermediate values by linear interpolation.

Table C2.3: Displacements [1] under tension and shear loading in concrete and masonry

Dübeltyp	Mean compressive strength	Load	Displacement under tension load [2]		Displacement under shear load [2]	
	$f_{cm,decl}$ [N/mm²]	**F** [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
URDL 8	≥ 3,5	0,18	0,01	0,02	0,36	0,54
URDL 10		0,21			0,43	0,64

[1] Valid for all ranges of temperatures. [2] Intermediate values by linear interpolation.

frame fixing URDL

Performances
Displacements in concrete, masonry and autoclaved aerated concrete

Annex C 2

Table C3.1: Characteristic resistance – solid brick TYPE A (base material group "b")

Base material	Drilling method	Bulk Density ρ	Mean compressive strength according to EN 771	URDL Ø 8 F_{Rk}	URDL Ø 10 F_{Rk}
Description	**-**	**[kg/dm³]**	**[N/mm²]**	**[kN]**	**[kN]**
Solid clay brick according to EN 771-1:2011+A1:2015 Mattone pieno 110x60x240 "Danesi"	Rotary and hammer drilling	1,7	20,0	3,0[1)]	2,0[1)]

Table C3.2: Characteristic – solid brick TYPE B (base material group "b")

Base material	Drilling method	Bulk Density ρ	Mean compressive strength according to EN 771	URDL Ø 8 F_{Rk}	URDL Ø 10 F_{Rk}
Description	**-**	**[kg/dm³]**	**[N/mm²]**	**[kN]**	**[kN]**
Solid clay brick according to EN 771-1:2011+A1:2015 Mattone pieno 250x120x55 "Terreal Italia"	Rotary and hammer drilling	1,7	20,0	4,0[1)]	5,0[1)]

Table C3.3: Characteristic resistance – solid brick TYPE E (base material group "b")

Base material	Drilling method	Bulk Density ρ	Mean compressive strength according to EN 771	URDL Ø 8 F_{Rk}	URDL Ø 10 F_{Rk}
Description	**-**	**[kg/dm³]**	**[N/mm²]**	**[kN]**	**[kN]**
Volcanic Tuff according to EN 771-3:2011+A1:2015 Fior di tufo 370x370x110 "Cave reunite"	Rotary and hammer drilling	2,4	7,5	-	0,3

Table C3.4: Characteristic resistance – solid brick TYPE F (base material group "b")

Base material	Drilling method	Bulk Density ρ	Mean compressive strength according to EN 771	URDL Ø 8 F_{Rk}	URDL Ø 10 F_{Rk}
Description	**-**	**[kg/dm³]**	**[N/mm²]**	**[kN]**	**[kN]**
Calcium silicate solid brick according to EN 771-2:2011+A1:2015 KS-„Plansteine“ KS-R(P)-20-2,0-8DF (240) "Heidelberger-Kalksandstein"	Rotary and hammer drilling	1,9	20,0	5,5[1)]	6,0[1)]

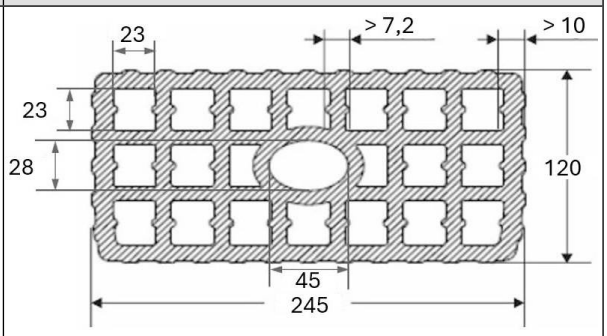
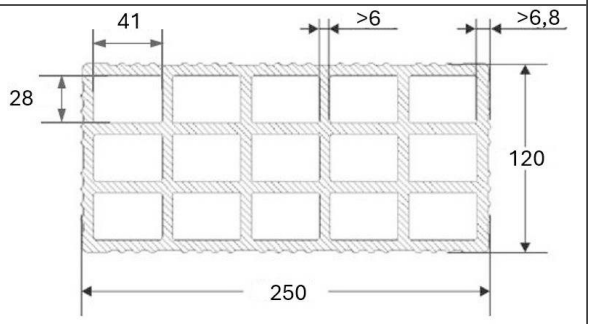
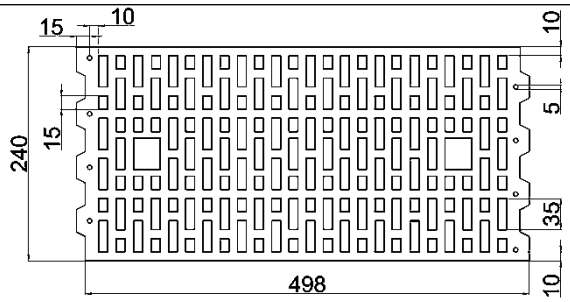
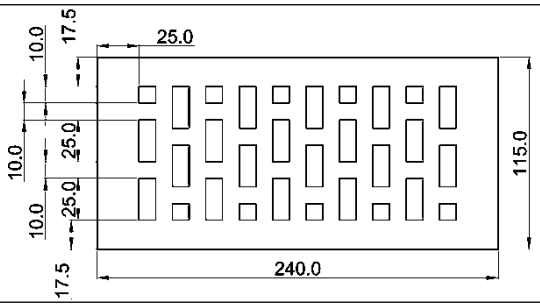
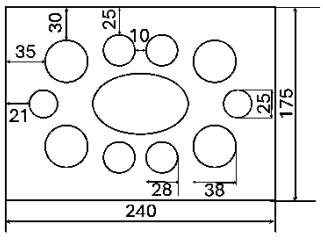
[1)] For brick with mean compressive strength in the range 10 - 20 N/mm²: $F_{Rk,low}$= 0,7 x F_{Rk} (with F_{Rk} for 20 N/mm²).

frame fixing URDL

Performances
Characteristic resistance for use in solid brick masonry

Annex C 3

Table C4.1: Hollow and perforated brick masonry (base material group "c") brick details

Stein	Base material / description	Dimensions [mm]	Brick drawings and dimensions
TYPE C	**Perforated clay brick Doppio doppio UNI "Danesi"**	**120x245x250**	
TYPE D	**Perforated clay brick according to EN 771-1:2011+A1:2015 Forati "Wienerberger"**	**120x250x250**	
TYPE G	**Perforated clay brick, according to EN 771-1:2011+A1:2015 Poroton-Perforated clay brick-Block-T-24,0-0,9 L "Wienerberger"**	**240x500x238**	
TYPE H	**Perforated clay brick, according to EN 771-1:2011+A1:2015 Poroton-Kleinformat HlzB- 2DF - 0,9 "Wienerberger"**	**115x240x113**	
TYPE I	**Calcium silicate hollow brick according to EN 771-2:2011+A1:2015 "Heidelberger-Kalksandstein" KS-L**	**175x240x113**	

Figures not to scale

frame fixing URDL

Performances
Hollow and perforated brick masonry dimensional details

Annex C 4

Table C5.1: Characteristic resistance – Hollow or perforated masonry (base material group "c")

Base material	Drilling method	Bulk Density ρ	Mean compressive strength according to EN 771	URDL Ø 8 F_{Rk}	URDL Ø 10 F_{Rk}
Description	**-**	**[kg/dm³]**	**[N/mm²]**	**[kN]**	**[kN]**
TYPE C					
Perforated clay brick according to EN 771-1:2011+A1:2015 Doppio doppio UNI 120x245x250 "Danesi"	rotary drilling	0,9	13,0	-	0,3
TYPE D					
Perforated clay brick according to EN 771-1:2011+A1:2015 Forati 120x250x250 "Wienerberger"	rotary drilling	0,6	2,0	0,3	-
TYPE G					
Perforated clay brick according to EN 771-1:2011+A1:2015 Poroton-Perforated clay brick-Block-T-24,0-0,9 L "Wienerberger"	rotary drilling	0,9	7,0	0,9	0,9
TYPE H					
Perforated clay brick according to EN 771-1:2011+A1:2015 Poroton-Kleinformat HlzB- 2DF -0,9 "Wienerberger"	rotary drilling	0,9	15,0	0,9	0,9
TYPE I					
Calcium silicate hollow brick according to EN 771-2:2011+A1:2015 "Heidelberger-Kalksandstein" KS-L	rotary drilling	1,5	15,0	5,0	5,5

Table C5.2: Characteristic resistance in autoclaved aerated concrete (base material group "d")

Base material	Drilling method	Bulk Density ρ	Mean compressive strength according to EN 771 $f_{cm,decl}$	URDL Ø 8 F_{Rk}	URDL Ø 10 F_{Rk}
Description	**-**	**[kg/dm³]**	**[N/mm²]**	**[kN]**	**[kN]**
Non-cracked aerated autoclaved concrete (blocks), according to EN 771-4: 2011+A1:2015	rotary drilling	0,5	3,5	0,5	0,6

frame fixing URDL

Performances
Characteristic resistance for use in hollow or perforated masonry and autoclaved aerated concrete

Annex C 5