



DÉCLARATION DES PERFORMANCES

DoP 0389

pour fixation pour cadres Upat URDL (Cheville plastique pour l'utilisation dans le béton et la maçonnerie)

FR

1. Code d'identification unique du type de produit:

DoP 0389
2. Usage(s) prévu(s):

Cheville plastique pour usage multiple dans le béton et la maçonnerie pour applications non structurales (catégorie d'utilisation a, b, c, d); voir annexes, en particulier les annexes B1 - B4.
3. Fabricant:

Upat Vertriebs GmbH, Bebelstraße 11, 79108 Freiburg im Breisgau, Allemagne
4. Mandataire:

-
5. Système(s) d'évaluation et de vérification de la constance des performances:

2+
6. Document d'évaluation européen:

EAD 330284-00-0604, edition 12/2020
- Evaluation Technique Européenne:

ETA-18/0548; 2025-11-20
- Organisme d'évaluation technique:

DIBt- Deutsches Institut für Bautechnik
- Organisme(s) notifié(s):

1020 TZÚS - Technical and Test Institute for Construction Prag
7. Performance(s) déclarée(s):

Résistance mécanique et stabilité (BWR 1)

Résistance à la rupture de l'acier sous charge de traction: voir annexes, en particulier annexe C1

Résistance à la rupture de l'acier ou du polymère sous charge de cisaillement: voir annexes, en particulier annexe C1

Résistance à l'extraction glissement ou à la rupture du béton ou à la rupture du polymère sous charge de traction (groupe du matériau support a): voir annexes, en particulier annexe C1

Résistance dans toutes les directions de charge sans bras de levier (groupes du matériau support b, c et d): voir annexes, en particulier les

Distance au bord et entraxe (groupe du matériau support a): voir annexes, en particulier annexe B2

Distance au bord et entraxe (groupes du matériau support b, c et d): voir annexes, en particulier annexe B3

Déplacements sous charge à court et long terme: voir annexes, en particulier annexe C2

Durabilité: voir annexes, en particulier les annexes A3, B1

Sécurité en cas d'incendie (BWR 2)

Réaction au feu: Classe A1

Résistance au feu: Annexe C1
8. Documentation technique appropriée et/ou documentation technique spécifique:

-

Les performances du produit identifié ci-dessus sont conformes aux performances déclarées. Conformément au règlement (UE) no 305/2011, la présente déclaration des performances est établie sous la seule responsabilité du fabricant mentionné ci-dessus.

Signé pour le fabricant et en son nom par:

Dr. Ronald Mihala, Director general de Investigación y Desarrollo
Tumlingen, 2025-12-10

Dieter Pfaff, Chef de la Fédération Internationale de Production et Gestion de la Qualité

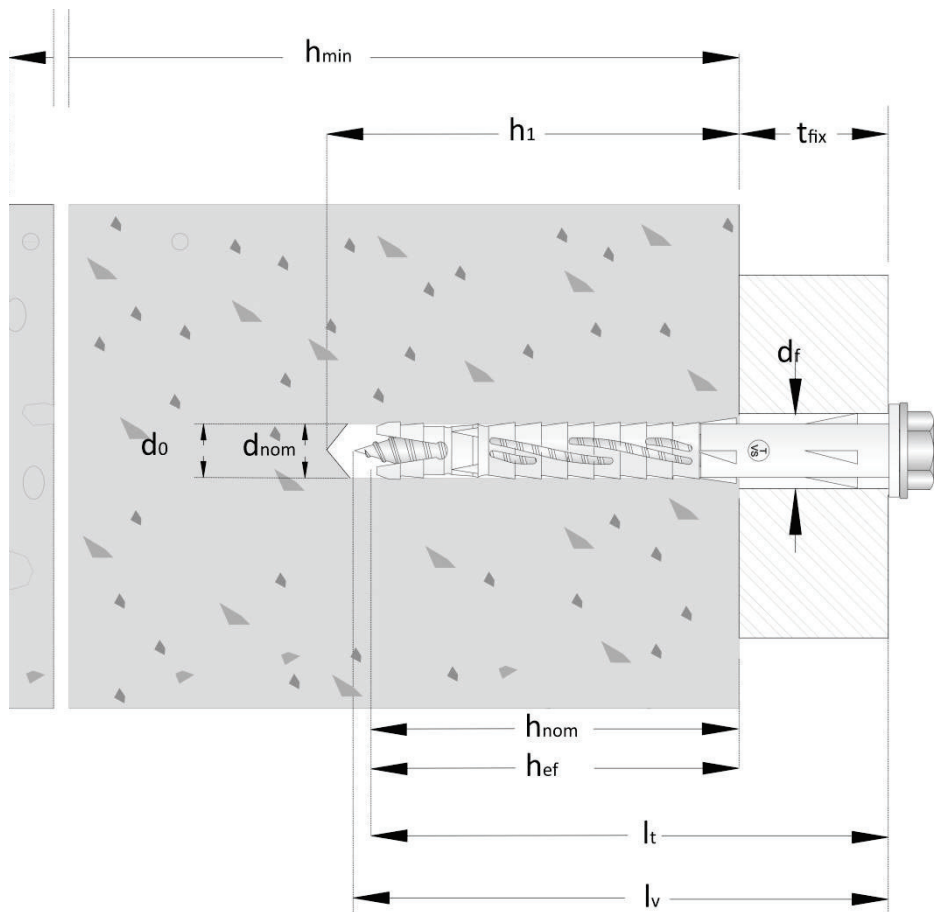
Cette DoP a été préparée en plusieurs langues. En cas de différend relatif à l'interprétation, la version anglaise prévaudra.
L'annexe comprend des informations volontaires et complémentaires en langue anglaise dépassant les exigences légales (spécifiées de manière neutre).

Translation guidance Essential Characteristics and Performance Parameters for Annexes

Guide de traduction des caractéristiques essentielles et des paramètres de performance pour les annexes

Safety in case of fire (BWR 2)		
Sécurité en cas d'incendie (BWR 2)		
1	Reaction to fire: Réaction au feu:	-
2	Resistance to fire: Résistance au feu:	$N_{Rk,s,fi}$; $N_{Rk,p,fi}$; $F_{Rk,fi,90}$ [kN]
Mechanical resistance and stability (BWR 4)		
Résistance mécanique et stabilité (BWR 1)		
3	Resistance to steel failure under tension loading: Résistance à la rupture de l'acier sous charge de traction:	$N_{Rk,s}$ [kN]
4	Resistance to steel or polymer failure under shear loading: Résistance à la rupture de l'acier ou du polymère sous charge de cisaillement:	$V_{Rk,s}$ [kN]; $M_{Rk,s}$ [Nm]; $V_{Rk,pol}$ [kN]
5	Resistance to pull-out or concrete failure or polymer failure under tension loading (base material group a) Résistance à l'extraction glissement ou à la rupture du béton ou à la rupture du polymère sous charge de traction (groupe du matériau support a):	$N_{Rk,p}$ [kN] / $N_{Rk,pol}$ [kN]
6	Resistance in any load direction without lever arm (base material group b,c,d): Résistance dans toutes les directions de charge sans bras de levier (groupes du matériau support b, c et d):	F_{Rk} [kN]
7	Edge distance and spacing (base material group a) Distance au bord et entraxe (groupe du matériau support a):	c_{cr} ; s_{cr} ; c_{min} ; s_{min} ; a ; h_{min} [mm]
8	Edge distance and spacing (base material group b,c,d): Distance au bord et entraxe (groupes du matériau support b, c et d):	c_{min} ; s_{min} ; h_{min} [mm]
9	Displacements under short-term and long-term loading: Déplacements sous charge à court et long terme:	δ_0 ; δ_∞ [mm]
Aspects of durability		
Durabilité:		
10	Durability: Durabilité:	-

URDL



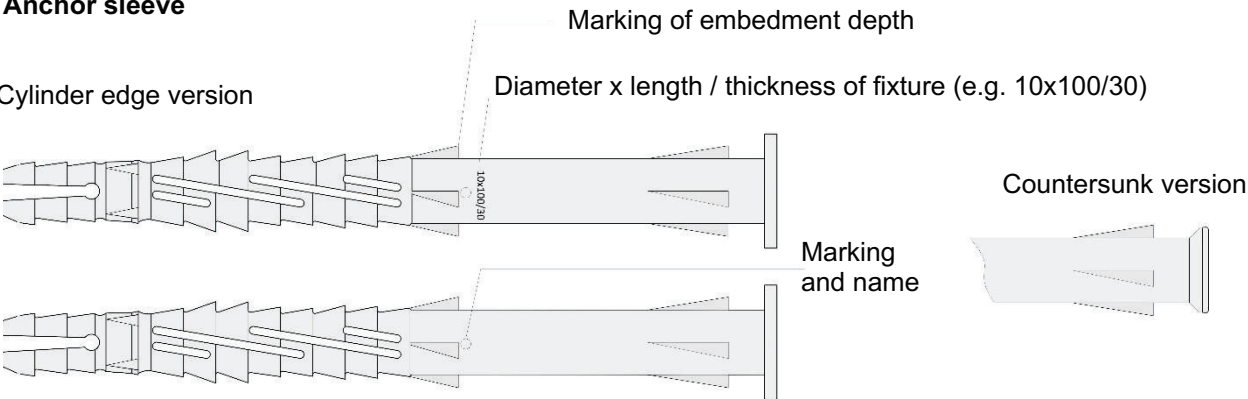
Legend

- $h_{nom} \triangleq h_{ef}$ = 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

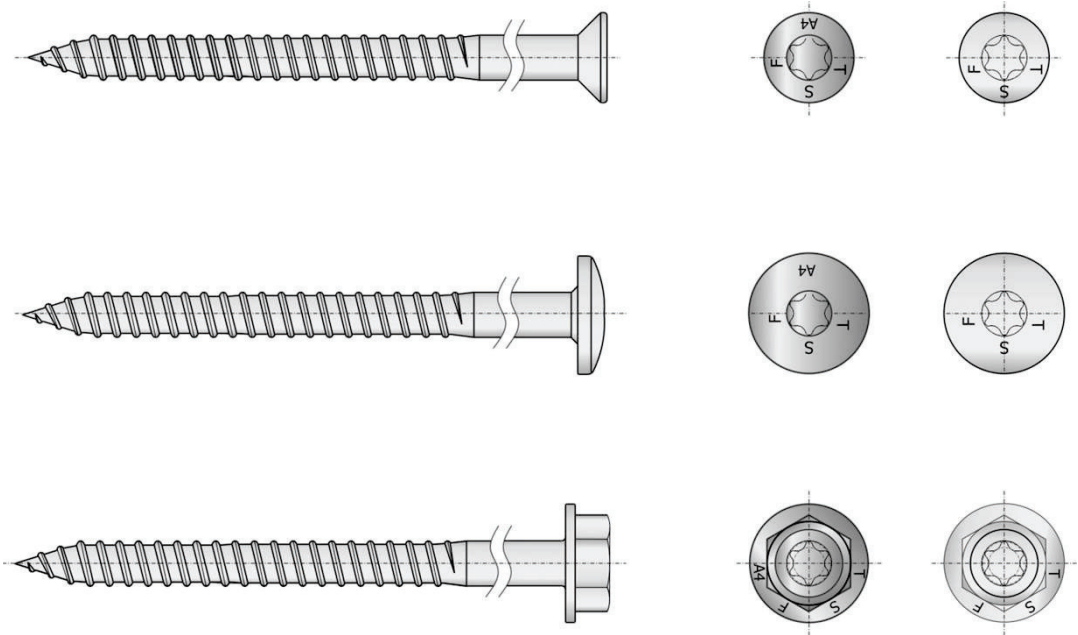
Figures not to scale

frame fixing URDL	Annex A 1 Appendix 1 / 12
Product description Installed anchor	

Anchor sleeve



Special screw (galvanized steel and stainless steel - A4)



Figures not to scale

frame fixing URDL

Product description
Anchor types / special screw – Marking and sizes

Annex A 2

Table A3.1: Dimensions

Anchor type	Anchor sleeve						Special screw	
	h_{nom} [mm]	$\varnothing d_{nom}$ [mm]	t_{fix} [mm]	min. l_d [mm]	max. l_d [mm]	$\varnothing d_{sf}$ [mm]	$\varnothing d_s$ [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

Product description
Dimensions / Materials

Annex A 3

Specifications of intended use

Anchorage 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 $\geq$ 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 $\geq$ 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 $\geq$ 0 °C.
- Exposure to UV due to solar radiation of the anchor not protected by e.g. plaster $\leq$ 6 weeks.
- No ingress of water in the core hole $<$ 0 °C.

frame fixing URDL

Intended use
Specifications

Annex B 1

Appendix 4 / 12

Table B2.1: Installation parameter

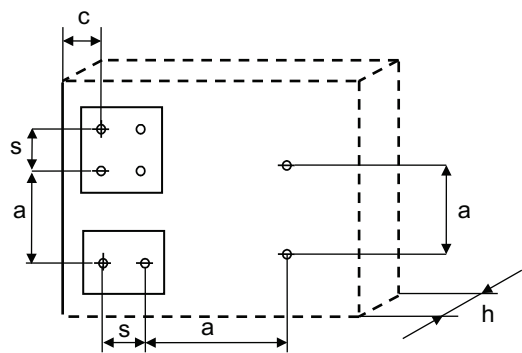
Anchor type		URDL 8	URDL 10
Nominal drill hole diameter	$d_0 =$ [mm]	8	10
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	8,45	10,45
Overall plastic anchor embedment depth in the base material	$h_{ef} = h_{nom} \geq$ [mm]	70	70
Depth of drill hole to deepest point	$h_1 \geq$ [mm]	90	90
Diameter of clearance hole in the fixture	$d_f \leq$ [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	$h_{nom} \geq$ [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	$\geq C16/20$	140	105	75	90	90
URDL 10	70	$\geq C16/20$	140	105	90	100	100

¹⁾ Intermediate values by linear interpolation.

Scheme of distance and spacing in concrete



Fixing points with a spacing $a \leq s_{cr,N}$ 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.

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frame fixing URDL

Intended use

Installation parameters, member thickness, edge distances and spacing in concrete
Scheme of anchors in concrete

Annex B 2

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

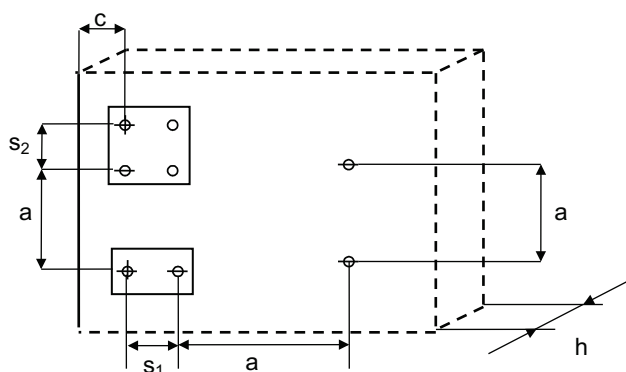


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frame fixing URDL

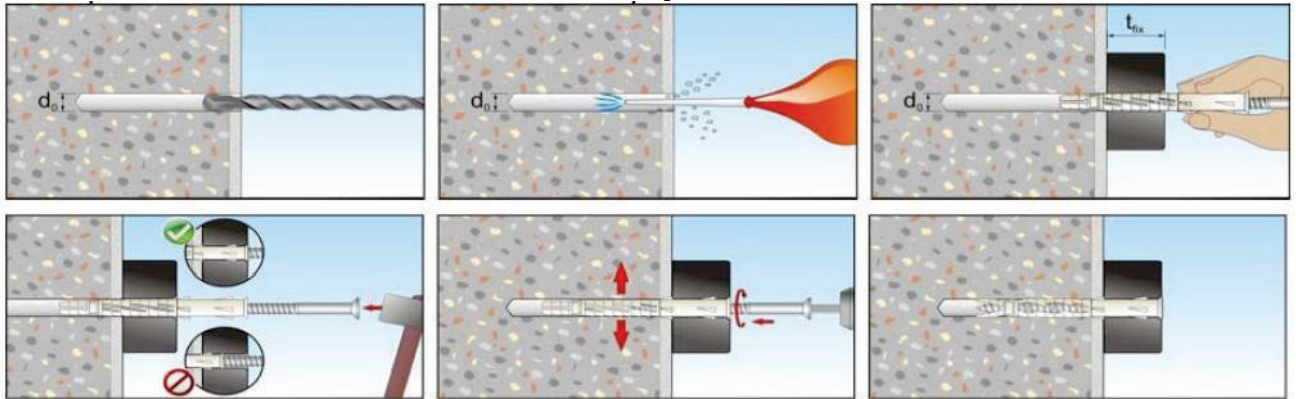
Intended use

Member thickness, edge distances and spacing in concrete
Scheme of anchors in masonry and autoclaved aerated concrete

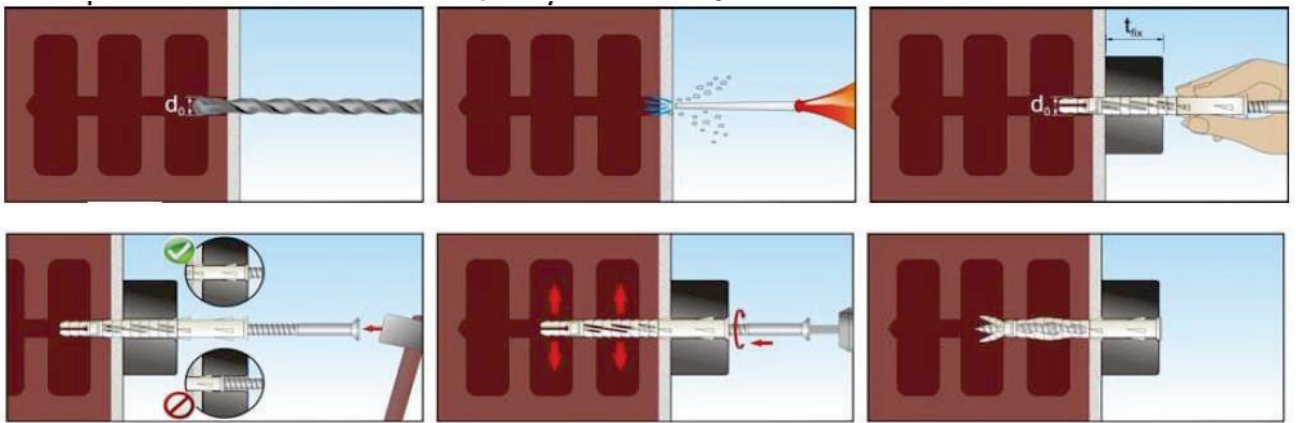
Annex B 3

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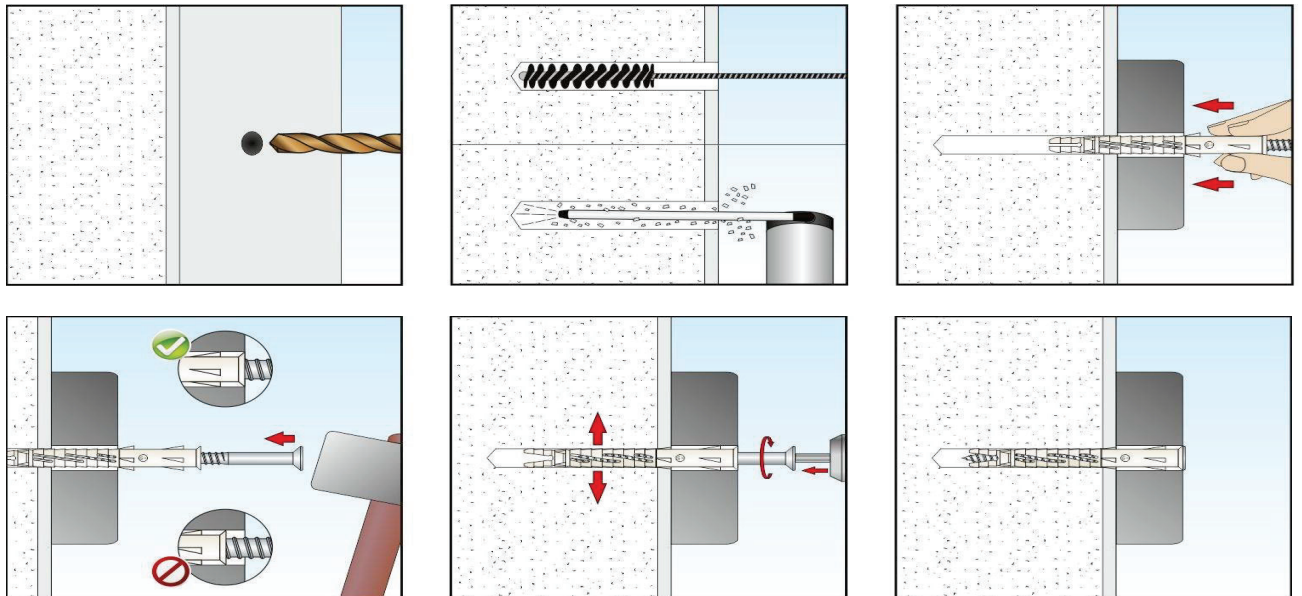
Installation instruction in concrete and solid masonry



Installation instruction in hollow- and perforated masonry



Installation in autoclaved aerated concrete



Figures not to scale

frame fixing URDL

Intended use
Installation instruction

Annex B 4

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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	$\gamma_{Ms}^{1)}$ [-]	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	$\gamma_{Ms}^{1)}$ [-]	1,5			
Characteristic shear resistance	$V_{Rk,s}$ [kN]	5,6	7,9	7,7	10,8
Partial safety factor	$\gamma_{Ms}^{1)}$ [-]	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 $f_{ck} \geq 16 \text{ N/mm}^2$ (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	$\leq 0,8$	1,0

¹⁾ $F_{Rk} / (\gamma_M \times \gamma_F)$.

²⁾ In absence of other national regulations.

frame fixing URDL

Performances

Characteristic bending resistance of the screw, characteristic resistance of the screw
Characteristic resistance for use in concrete, values under fire exposure

Annex C 1

Appendix 8 / 12

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/mm ²]	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

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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 $\varnothing 8$ F_{Rk}	URDL $\varnothing 10$ F_{Rk}
Description	-	[kg/dm ³]	[N/mm ²]	[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 $\varnothing 8$ F_{Rk}	URDL $\varnothing 10$ F_{Rk}
Description	-	[kg/dm ³]	[N/mm ²]	[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 $\varnothing 8$ F_{Rk}	URDL $\varnothing 10$ F_{Rk}
Description	-	[kg/dm ³]	[N/mm ²]	[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 $\varnothing 8$ F_{Rk}	URDL $\varnothing 10$ F_{Rk}
Description	-	[kg/dm ³]	[N/mm ²]	[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: $F_{Rk,low} = 0,7 \times F_{Rk}$ (with F_{Rk} for 20 N/mm²).

frame fixing URDL

Performances

Characteristic resistance for use in solid brick masonry

Annex C 3

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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 H12B- 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

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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 $\varnothing 8$ F_{Rk}	URDL $\varnothing 10$ F_{Rk}
Description	-	[kg/dm ³]	[N/mm ²]	[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-Kleinforma HIZB- 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 $\varnothing 8$ F_{Rk}	URDL $\varnothing 10$ F_{Rk}
Description	-	[kg/dm ³]	[N/mm ²]	[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

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