

Declaration of Performance



No 2 - 003 - 100305 - 2017/1

- 1.) Unique identification code of the product-type:
EJOT SDF-10H
- 2.) Intended use:
Plastic anchor for multiple use in concrete and masonry for non-structural applications
- 3.) Manufacturer:
EJOT Baubefestigungen GmbH, In der Stockwiese 35, 57334 Bad Laasphe
- 4.) System of AVCP:
System 2+
- 5.) European Assessment Document
European Technical Assessment:
Technical assessment body:
Notified body:
ETAG 020
ETA-10/0305
DIBt - Deutsches Institut für Bautechnik, Berlin
0672 - MPA - Materialprüfanstalt Universität Stuttgart
- 6.) Declared Performance:
a) Mechanical resistance and stability (BWR 1) and safety and accessibility (BWR 4)

Essential characteristic	Performance
Characteristic resistance for tension and shear loads	See Annexes C 1 – C 6
Characteristic resistance for bending moments	See Annex C 1
Displacements under shear and tension load	See Annex C 2
Anchor distances and dimensions of members	See Annex B 3 – B 5
-	-
-	-

b) Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Anchorage satisfy requirements for Class A 1
Resistance to fire	See Annex C 2

c) Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
-	-
-	-

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Dr. Jens Weber / Vice President
(Name and function)

Bad Laasphe, 06.12.2017
(Place and date of issue)


(Signature)

EKSPLUATĀCIJAS ĪPAŠĪBU DEKLARĀCIJA



Nr. 2 - 003 - 100305 - 2017/1

- 1.)

Unikālais izstrādājuma tipa identifikācijas numurs:
EJOT SDF-10H
- 2.)

Paredzētais izmantojums:
Plastmasas enkurs daudzkārtējai izmantošanai betonā un mūrī, kas nav paredzēts konstrukcijām
- 3.)

Ražotājs:
EJOT Baubefestigungen GmbH, In der Stockwiese 35, 57334 Bad Laasphe
- 4.)

Ekspluatācijas īpašību noturības novērtējuma un pārbaudes (AVCP) sistēma(-as):
Sistēma 2+
- 5.)

Eiropas novērtējuma dokuments:
Eiropas tehniskais novērtējums:
Tehniskā novērtējuma iestāde:
Paziņotā(-ās) iestāde(-es):

ETAG 020
ETA-10/0305
DIBt - Deutsches Institut für Bautechnik, Berlin
0672 - MPA - Materialprüfanstalt Universität Stuttgart
- 6.)

Deklarētā(-ās) ekspluatācijas īpašība(-as):
a) Mehāniskā izturība un stabilitāte (BWR 1) un drošība un pieejamība (BWR 4)

Būtiskie raksturlielumi	Ekspluatācijas īpašības
Raksturīga izturība pret spriegojumu un bīdes slodzi	Skatīt pielikumus C 1 - C 6
Raksturīga izturība pret lieces momentiem	Skatīt C pielikumu 1
Pārvietojumi zem bīdes un spriegojuma slodzes	Skatīt C 2 pielikumu
Enkuru attālumi un locekļu izmēri	Skatīt B3. Pielikumu - B 5
-	-
-	-

b) Drošība ugunsgrēka gadījumā (BWR 2)	
Būtiskie raksturlielumi	Ekspluatācijas īpašības
Reakcija uz uguni	Stiprinājumi atbilst A 1 klases prasībām
Izturība pret uguni	Skatīt C 2 pielikumu

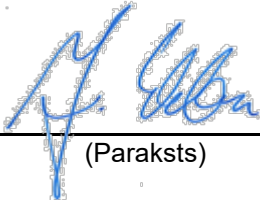
c) Higiēna, veselība un vide (BWR 3)	
Būtiskie raksturlielumi	Ekspluatācijas īpašības
-	-
-	-

Iepriekš norādītā izstrādājuma ekspluatācijas īpašības atbilst deklarēto ekspluatācijas īpašību kopumam. Šī ekspluatācijas īpašību deklarācija izdota saskaņā ar Regulu (ES) Nr. 305/2011, un par to ir atbildīgs vienīgi iepriekš norādītais ražotājs.

Parakstīts ražotāja vārdā:

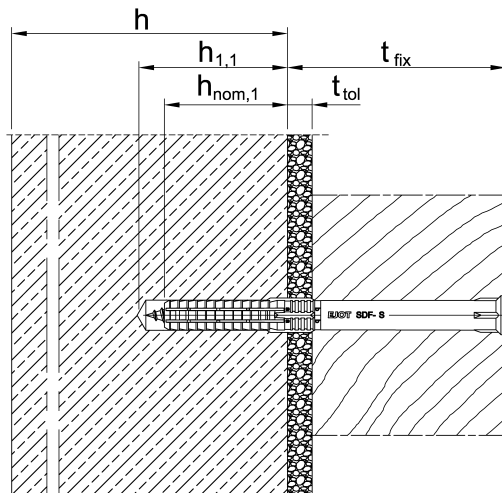
Dr. Jens Weber / vadītājs
(Vārds, uzvārds, amats)

Bad Laasphe, 06.12.2017
(Izsniegšanas vieta un datums)

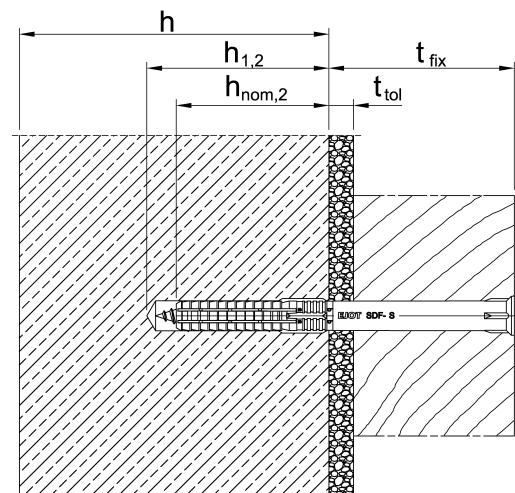

(Paraksts)

Intended use

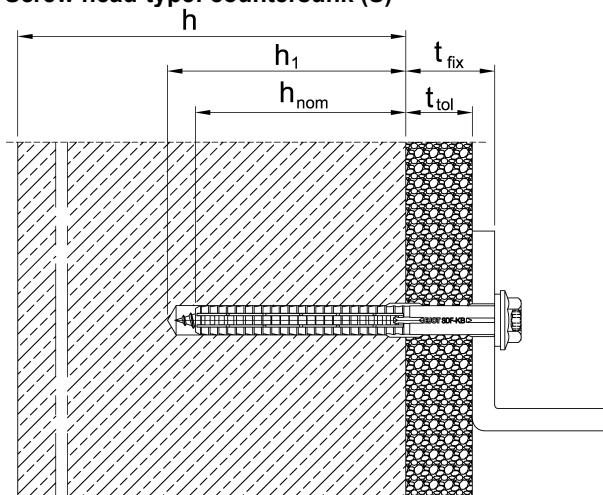
Anchorage in concrete, solid bricks, hollow or perforated bricks, autoclaved aerated concrete (AAC) and thin concrete components (weather shell)



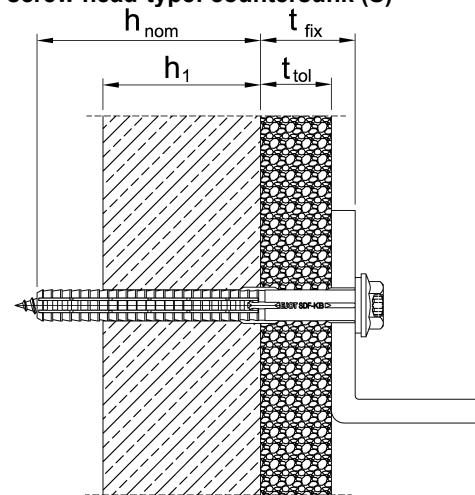
Intended use SDF-10V in concrete (h_{nom1})
Screw head-type: countersunk (S)



Intended use SDF-10V in solid block (h_{nom2})
screw head-type: countersunk (S)



**Intended use SDF-10H in concrete/masonry/
autoclaved aerated concrete (h_{nom})**
Screw head-type: collar head (KB)



Intended use SDF-10H in a weather shell (h_{nom})
Screw head-type: collar head (KB)

Legend

h	=	Thickness of member
$h_{1,1}$	=	Depth of drilled hole to deepest point (application in concrete)
$h_{1,2}$	=	Depth of drilled hole to deepest point (application in masonry)
h_{nom}	=	Overall plastic anchor embedment depth (setting depth)
$h_{nom,1}$	=	Overall plastic anchor embedment depth (application in concrete)
$h_{nom,2}$	=	Overall plastic anchor embedment depth (application in masonry)
t_{tol}	=	Thickness of equalizing layer or non-load bearing coating
t_{fix}	=	t_{tol} + thickness of fixture

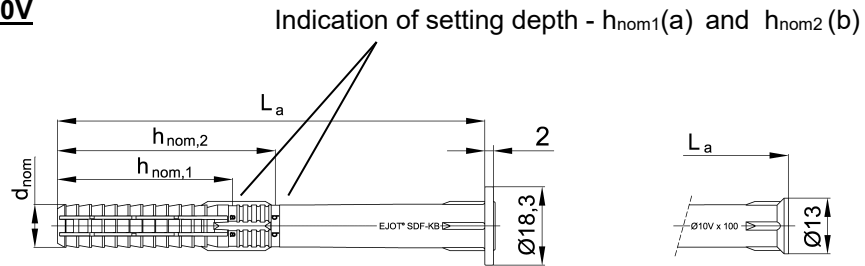
EJOT SDF 10V und EJOT SDF 10H

Product description
Installed condition

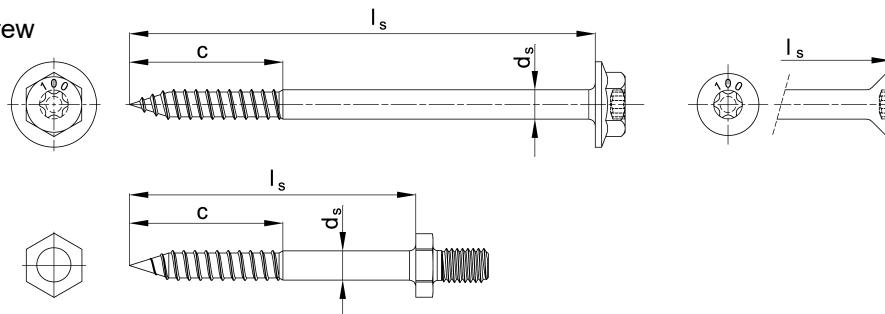
Annex A 1

Anchor unit SDF-10V

Anchor sleeve



Special screw



Marking of anchor sleeve:

Manufacturer, anchor type incl. head type
diameter, length

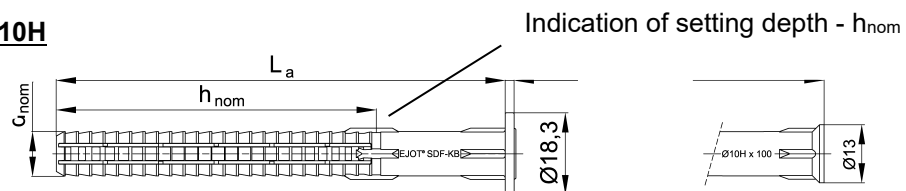
Example: EJOT SDF-KB-10V x 100

Marking of special screw:

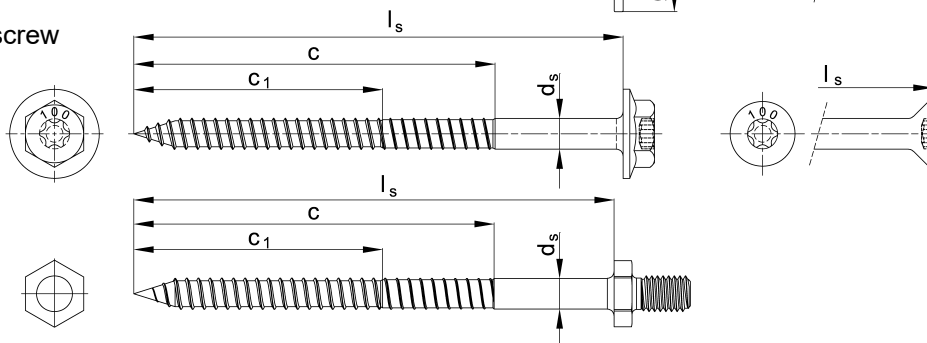
Anchor length (e.g. 100)

Anchor unit SDF-10H

Anchor sleeve



Special screw



Marking of anchor sleeve:

Manufacturer, anchor type incl. head type
diameter, length

Example: EJOT SDF-KB-10H x 100

Marking of special screw:

Anchor length (e.g. 100)

EJOT SDF 10V und EJOT SDF 10H

Product description

Anchor types, marking of anchor sleeve and special screw

Annex A 2

Product designation key

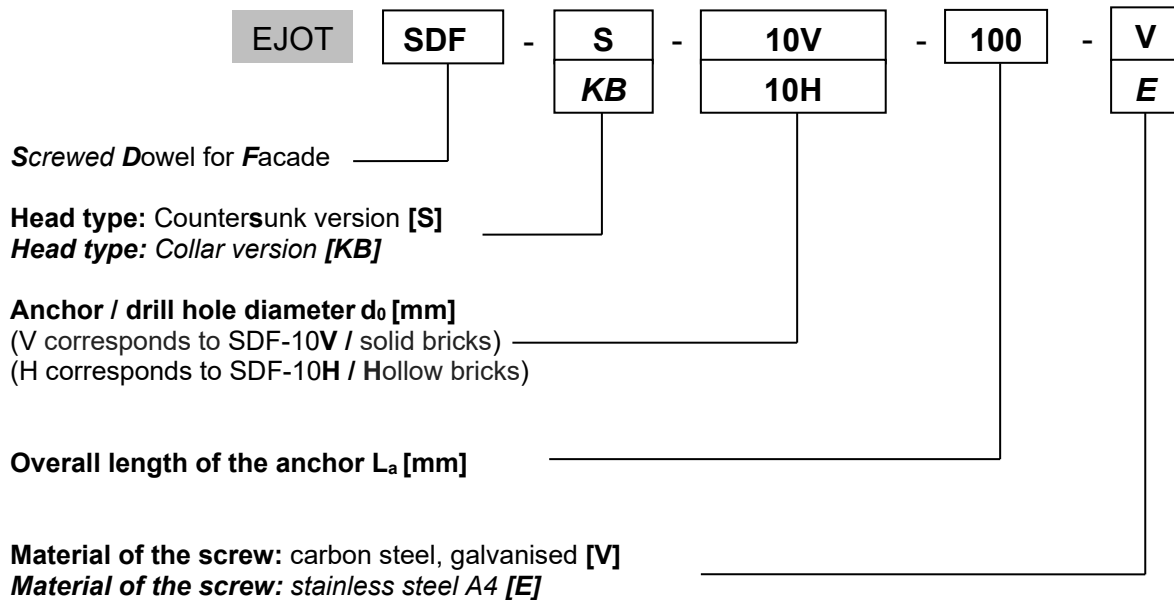


Table A3.1: Dimensions [mm]

Anchor type	Anchor sleeve							Special screw			
	Farbe	d_{nom}	h_{nom1}	h_{nom2}	min L_{a1}	min L_{a2}	max L_a	L_s	d_s	C_1	C
SDF-S-10V	blue	10	40	50	50	60	220	$L_a + 8,0$	7,0	--	35
SDF-KB-10V	blue	10	40	50	50	60	220	$L_a + 8,0$	7,0	--	35
SDF-S-10H	orange	10	70		80		300	$L_a + 8,0$	7,0	55	80
SDF-KB-10H	orange	10	70		80		220	$L_a + 8,0$	7,0	55	80

(Designations see annex A 2)

Table A3.2: Material

Element	Material
Anchor sleeve	Polyamide PA6, colour see Table A3.1
Special screw	Carbon steel, galvanized > 5 μm acc. EN ISO 4042:1999
	Stainless steel acc. EN 10088-3:2012, z.B. 1.4401 / 1.4571 / 1.4578 / 1.4362 strength class $\geq$ A4-70

EJOT SDF 10V und EJOT SDF 10H

Product description

Product designation key, dimensions, material

Annex A 3

Specifications of intended use

Anchorage is subject to:

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

Base materials:

- Reinforced or unreinforced normal weight concrete with strength classes $\geq$ C12/15 (usage category a), according to EN 206-1:2000, Annex C 2
- thin concrete components (weather shell) $\geq$ 50 mm thickness (only SDF-10H)
- Solid brick masonry (usage category b), according to Annex C 3 and C 4.
Note: The characteristic resistance is also valid for larger brick sizes and larger compressive strength of the masonry unit.
- Hollow brick masonry (usage category c), according to Annex C 5.
- Autoclaved aerated concrete (usage category d), according to Annex C 6.
- Mortar strength class of the masonry $\geq$ M2,5 at minimum according to EN 998-2:2010.
- For other base materials of the use categories a, b, c and d the characteristic resistance of the anchor may be determined by job site tests according to ETAG 020, Annex B edition March 2012.

Temperature Range:

- c: -40°C to 50°C (max. short term temperature + 50°C and max. long term temperature +30°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 coated steel, stainless steel).
- The specific screw made of galvanized 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 permanently damp internal condition, if no particular aggressive conditions exist (stainless steel).
- 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 the ETAG 020, Annex C Edition March 2012 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.
- Fasteners are only to be used for multiple use for non-structural application, according to ETAG 020 Edition March 2012.

Installation:

- Hole drilling by the drill modes acc. to Annex C for use category a,b,c and d.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation temperature from -10°C to +40°C
- Exposure to UV due to solar radiation of anchor not protected $\leq$ 6 weeks

EJOT SDF 10V und EJOT SDF 10H

Intended use
Specifications

Annex B 1

Table B2.1: Installation parameters

Anchor type			SDF-10V		SDF-10H
Use category ¹⁾			a	b	a,b,c,d
drill hole diameter	d ₀ [mm]	=	10	10	10
Cutting diameter of drill bit	d _{cut} [mm]	≤	10,45	10,45	10,45
Depth of the drill hole to deepest point	h _{1,1} [mm]	≥	50	----	----
Overall plastic anchor embedment depth	h _{nom1} [mm]	≥	40	----	----
Depth of the drill hole to deepest point	h _{1,2} [mm]	≥	----	60	----
Overall plastic anchor embedment depth	h _{nom2} [mm]	≥	----	50	----
Depth of the drill hole to deepest point	h ₁ [mm]	≥	----	----	80
Overall plastic anchor embedment depth ²⁾	h _{nom} ²⁾ [mm]	=	----	----	70
Diameter of the clearance hole in the fixture	d _f [mm]	≤	10,5	10,5	10,5
Minimum installation temperature	[°C]		-10		
Temperature range (c)	[°C]		30 - 50		
Temperature range (b)	[°C]		50 - 80		

¹⁾ Use category: a = concrete, b = solid masonry, c = hollow or perforated masonry, d = autoclaved aerated concrete

²⁾ For masonry of hollow or perforated brick the influence h_{nom} > 70 mm has to be determined by job-site tests according to ETAG 020, Annex B.

EJOT SDF 10V und EJOT SDF 10H

Intended use

Installation parameters use category a, b, c, d

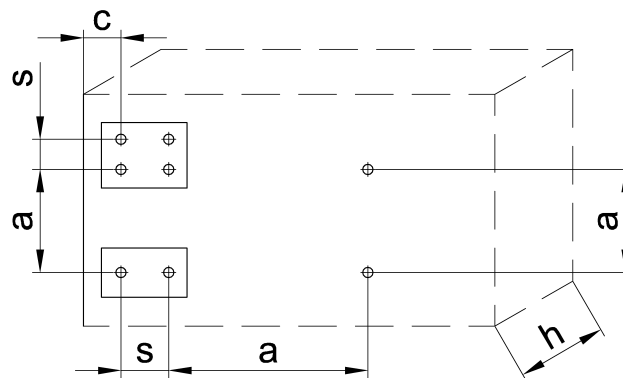
Annex B 2

Table B3.1: Minimum member thickness, spacing and edge distance in concrete (use category a)

Anchor type		Min. member thickness h_{min} [mm]	Characteristic edge distance $c_{cr,N}$ [mm]	Minimum spacing and edge distances [mm]
SDF-10V	concrete $\geq$ C16/20	100	80	$s_{min} = 60$ für $c_{min} \geq 50$
	concrete C12/15		110	$s_{min} = 85$ für $c_{min} \geq 70$
SDF-10H	concrete $\geq$ C 16/20		80	$s_{min} = 60$ für $c_{min} \geq 50$
	concrete C 12/15		110	$s_{min} = 85$ für $c_{min} \geq 70$
	concrete C20/25 (thin concrete slabs)	50	160	$s_{min} = 80$ für $c_{min} \geq 160$

Fixing points with a spacing $a \leq 80$ mm are considered as a group with a maximum characteristic resistance $N_{Rk,p}$ according to Table C2.2. For spacing $a > 80$ mm the anchors are considered as single anchors, each with a characteristic resistance $N_{Rk,p}$ acc. to Table C2.2.

Scheme of spacing and edge distances in concrete



h = member thickness
 c = edge distance
 a = spacing
 s_{min} = spacing within anchor group

EJOT SDF 10V und EJOT SDF 10H

Intended use

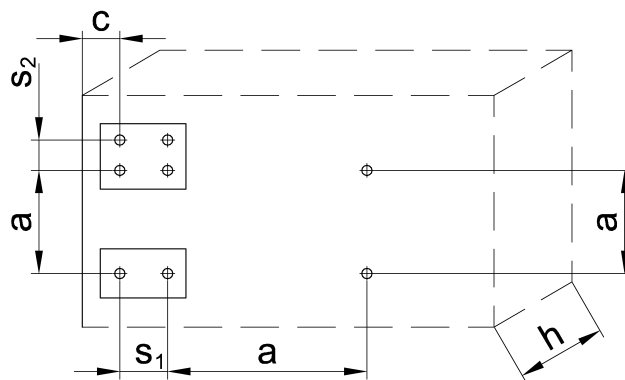
Minimum member thickness, spacing and edge distance in concrete

Annex B 3

Table B4.1: Minimum member thickness, spacing and edge distance in masonry (use category b and c)

Anchor type		SDF-10V	SDF-10H
Minimum member thickness	$h_{\min}$ [mm]	100	100
Single anchor			
Minimum edge distance	$c_{\min}$ [mm]	100	100
Minimum spacing	$a_{\min}$ [mm]	250	250
Anchor group			
Minimum edge distance	$c_{\min}$ [mm]	100	
Minimum spacing perpendicular to free edge	$s_{1,\min}$ [mm]	100	
Minimum spacing parallel to free edge	$s_{2,\min}$ [mm]	100	

Scheme of spacing and edge distances in masonry



- h = member thickness
- a = spacing
- c = edge distance
- s_1 = spacing (perpendicular to the free edge) within an anchor group
- s_2 = spacing (parallel to the free edge) within an anchor group

EJOT SDF 10V und EJOT SDF 10H

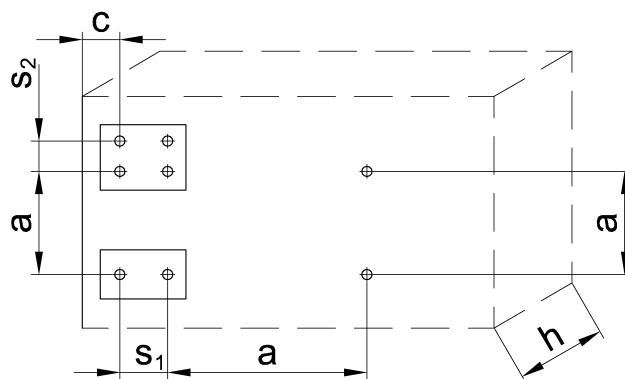
Intended use
Minimum member thickness, spacing and edge distance in masonry

Annex B 4

Table B5.1: Minimum member thickness, spacing and edge distance in autoclaved aerated concrete (use category d)

SDF -10H		$f_b \geq 4 \text{ N/mm}^2$	$f_b \geq 6 \text{ N/mm}^2$
Single anchor			
Minimum member thickness	$h_{\min} \text{ [mm]}$	100	140
Minimum edge distance	$c_{\min} \text{ [mm]}$	100	
Minimum spacing	$a_{\min} \text{ [mm]}$	250	
Anchor group			
Minimum member thickness	$h_{\min} \text{ [mm]}$	140	
Minimum edge distance	$c_{1,\min} \text{ [mm]}$	100	
Minimum edge distance (perpendicular to $c_{1,\min}$)	$c_{2,\min} \text{ [mm]}$	150	
Minimum spacing perpendicular to free edge	$s_{1,\min} \text{ [mm]}$	80	
Minimum spacing parallel to free edge	$s_{2,\min} \text{ [mm]}$	80	

Scheme of spacing and edge distances in autoclaved aerated concrete



- h = member thickness
- a = spacing
- c = edge distance
- s_1 = spacing (perpendicular to the free edge) within an anchor group
- s_2 = spacing (parallel to the free edge) within an anchor group

EJOT SDF 10V und EJOT SDF 10H

Intended use

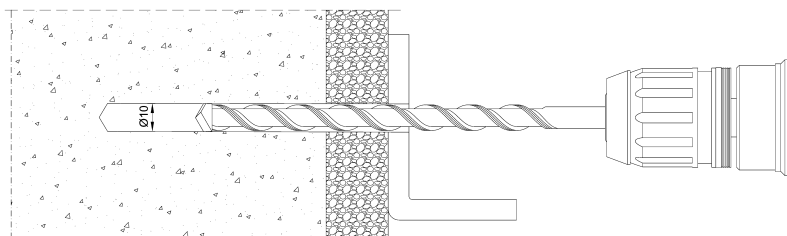
Minimum member thickness, spacing and edge distance in autoclaved aerated concrete

Annex B 5

Installation instructions

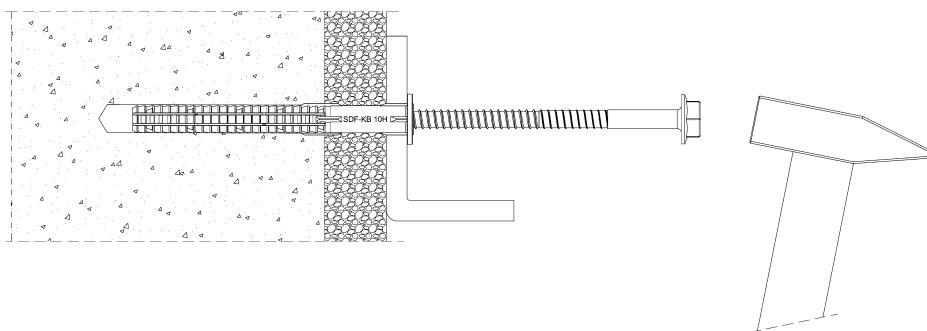
(exemplary for the fixing of a pre-drilled metal attachment part)

1. Drill the hole $\varnothing 10$ mm using the drill method described in Annex C

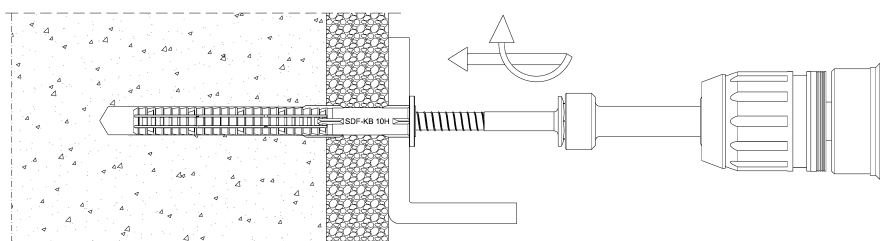


2. Cleaning of the hole

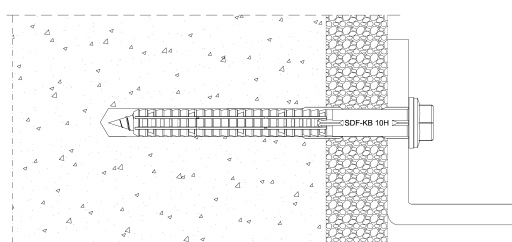
Insert the assembled anchor (screw and sleeve) using a hammer, until the plastic sleeve is flush with surface of fixture



3. Screw in the screw until the head is rested on the plastic sleeve



4. Correctly installed anchor



EJOT SDF 10V und EJOT SDF 10H

Intended use
Installation instructions

Annex B 6

Table C1.1: Characteristic bending moment of the screw (use category a, b, c and d)

Anchor type	SDF-10V				SDF-10H	
Material	Steel, galvanized		Stainless steel A4		Steel galvanized	Stainless steel A4
Characteristic bending moment $M_{Rk,s}$ [Nm]	13,80 ²⁾	23,01 ³⁾	16,09 ²⁾	26,62 ³⁾	17,67	20,62
Partial safety factor γ_{Ms} ¹⁾	1,25		1,56		1,25	1,56

1) in absence of other national regulations

2) at $h_{nom,1}$

3) at $h_{nom,2}$

Table C1.2: Characteristic resistance of the screw (use category a, b, c and d)

Anchor type	SDF-10V				SDF-10H	
Material	Steel, galvanized		Stainless steel A4		Steel, galvanized	Stainless steel A4
Characteristic tension resistance $N_{Rk,s}$ [kN]	15,85		18,49		18,70	21,82
Partial safety factor γ_{Ms} ¹⁾	1,5		1,87		1,5	1,87
Characteristic shear resistance $V_{Rk,s}$ [kN]	7,93 ²⁾	11,09 ³⁾	9,12 ²⁾	12,94 ³⁾	9,35	10,91
Partial safety factor γ_{Ms} ¹⁾	1,25		1,56		1,25	1,56

1) in absence of other national regulations

2) at $h_{nom,1}$

3) at $h_{nom,2}$

EJOT SDF 10V und EJOT SDF 10H

Performance

Characteristic resistance of the screw

Annex C 1

Table C2.1: Displacements ¹⁾²⁾ under tension and shear loads (use category a, b, c and d)

Anchor type		Displacements under tension			Displacements under shear		
		F [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	F [kN]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
Concrete, solid and hollow or perforated masonry							
SDF-10V		1,8	0,36	0,72	1,8	0,41	0,82
SDF-10H		1,8	0,37	0,74	1,8	0,41	0,82
Autoclaved aerated concrete							
SDF-10H	$f_b \geq 4 \text{ N/mm}^2$	0,54	0,17	0,34	0,54	1,08	1,62
	$f_b \geq 6 \text{ N/mm}^2$	0,89	0,41	0,82	0,89	1,78	2,67

¹⁾ Valid for all temperature ranges

²⁾ Intermediate values can be interpolated

Table C2.2: Characteristic resistance for pull-out failure, use in concrete

Pull-out failure	SDF-10V		SDF-10H	
Overall plastic anchor embedment depth $h_{nom,1}$ [mm]	40		70	
Temperature range	30/50 °C	50/80 °C	30/50 °C	50/80 °C
Concrete $\geq$ C 12/15 Standard concrete slabs				
Characteristic tension resistance $N_{Rk,p}$ [kN]	4,5	4,0	4,5	4,0
Partial safety factor $\gamma_{Mc}^{1)}$	1,8			
Concrete $\geq$ C12/15 thin concrete slabs ($h= 50mm$ bis 100 mm)				
Overall plastic anchor embedment depth $h_{nom,1}$ [mm]	----		70	
Temperature range			30/50 °C	50/80 °C
Characteristic tension resistance $N_{Rk,p}$ [kN]			3,0	3,0
Partial safety factor $\gamma_{Mc}^{1)}$			1,8	
Characteristic resistance under fire exposure in concrete C 20/25 to C50/60 in any load direction, no permanent centric tension load and without lever arm, fastening of facade systems (Fire resistance class R 90)				
Characteristic tension resistance F_{Rk} [kN]	$\leq 0,8$		$\leq 0,8$	

¹⁾ in the absence of other national regulations

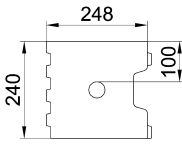
EJOT SDF 10V und EJOT SDF 10H

Performances

Displacements under tension and shear loads, Characteristic resistance in concrete and thin concrete slabs, Characteristic resistance in concrete under fire exposure

Annex C 2

Table C3.1: SDF-10V Characteristic resistance $F_{Rk}^{1)}$ in solid masonry (use category b) with $h_{nom,2} \geq 50$ mm

Base material, min DF or min. size (LxWxH) [mm]	Geometry of the brick	Minimum com- pressive strength f_b [N/mm ²]	Bulk density ρ [kg/dm ³]	$F_{Rk}^{1)}$ [kN]	$F_{Rk}^{1)}$ [kN]
				30°C – 50°C	50°C – 80°C
Solid masonry					
Clay brick Mz DIN 105-100:2012 / EN 771-1:2011 e.g. Schlagmann, MZ Format: 2 DF (240x115x113)	-	20	$\geq 1,8$	2,5	2,5
		10		2,0	1,5
Sand-lime solid brick, KS DIN V 106:2005-10 / EN 771-2:2011 e.g. Unika Format: NF(240x115x71)	-	36	$\geq 2,0$	4,0	4,0
		20		2,0	2,0
		10		1,5	1,5
Sand-lime solid brick, KS DIN V 106:2005-10 / EN 771-2:2011 e.g. Unika Format: 8DF (248x240x238)		20	$\geq 1,8$	4,5	4,5
		10		3,0	3,0
Lightweight concrete solid brick, V DIN V 18152-100:2005-10 / EN 771-3:2011 e.g. Fa. Nütling, Liapor V6 Format: 2 DF (240x115x113)	-	6	$\geq 1,2$	0,30	0,30
Partial safety factor $\gamma_{Mm}^{2)}$				2,5	

1) Characteristic resistance F_{Rk} for tension, shear or combined tension and shear loading.
The characteristic resistance is valid for single anchors or for a group of two or four anchors
with a spacing equal or larger than the minimum spacing s_{min} according to Table B4.1
Drilling method = Hammer drilling

2) In the absence of other national regulations

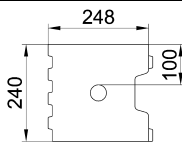
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Performances

Characteristic resistance in solid masonry (SDF-10V)

Annex C 3

Table C4.1: SDF-10H Characteristic resistance $F_{Rk}^{(1)}$ in solid masonry (use category b) with $h_{nom} \geq 70$ mm

Base material, min DF or min. size (LxWxH) [mm]	Geometry of the brick	Minimum com- pressive strength f _b [N/mm ²]	Bulk density ρ [kg/dm ³]	F _{rk} ¹⁾ [kN]	F _{rk} ¹⁾ [kN]
				30°C – 50°C	50°C – 80°C
Solid masonry					
Clay brick Mz DIN 105-100:2012 / EN 771-1:2011 e.g. Schlagmann, MZ Format: 2 DF (240x115x113)	-	20	≥ 1,8	4,0	4,0
		10		3,0	3,0
Sand-lime solid brick, KS DIN V 106:2005-10 / EN 771-2:2011 e.g. Unika Format: NF (240x115x71)	-	36	≥ 2,0	4,5	4,5
		20		2,5	2,5
		10		1,5	1,5
Sand-lime solid brick, KS DIN V 106:2005-10 / EN 771-2:2011 e.g. Unika Format: 8DF (248x240x238)		20	≥ 1,8	4,5	4,5
		10		3,5	3,5
Lightweight concrete solid brick, V DIN V 18152-100:2005-10 / EN 771-3:2011 e.g. Fa. Nüdling, Liapor V6 Format: 2 DF (240x115x113)	-	6	≥ 1,2	2,0	2,0
		4		1,2	1,2
Lightweight concrete solid block Vbl DIN V 18152-100:2005-10 / EN 771-3:2011 e.g. Fa. Nüdling, FCN Liapor Format:(1200x800x200)	-	4	≥ 1,0	2,0	2,0
		2		0,9	0,9
Partial safety factor γ _{Mm} ²⁾				2,5	

1) Characteristic resistance F_{Rk} for tension, shear or combined tension and shear loading.
The characteristic resistance is valid for single anchors or for a group of two or four anchors
with a spacing equal or larger than the minimum spacing s_{min} according to Table B4.1
Drilling method = Hammer drilling

2) in the absence of other national regulations

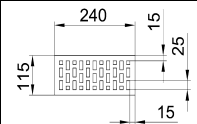
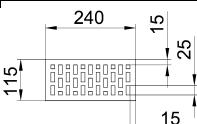
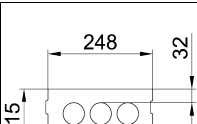
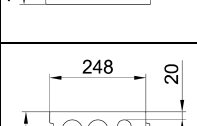
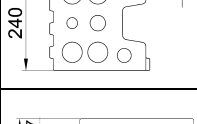
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Performances

Characteristic resistance in solid masonry (SDF-10H)

Annex C 4

Table C5.1: SDF-10H characteristic resistance $F_{Rk}^{(1)}$ for masonry of hollow or perforated brick (use category c) with $h_{nom} = 70$ mm
(The influence of $h_{nom} > 70$ mm has to be detected by job-site tests)

Base material, min DF or min. size (LxWxH) [mm]	Geometry of the brick	Minimum com- pressive strength f _b [N/mm ²]	Bulk density ρ [kg/dm ³]	F _{Rk} ¹⁾ [kN]	F _{Rk} ¹⁾ [kN]
				30°C – 50°C	50°C – 80°C
Hollow or perforated masonry					
Vertically perforated clay brick, HLz DIN 105-100:2012 / EN 771-1:2011 e.g. Unipor Format: 2 DF (240x115x113)		20	≥ 1,2	1,50	1,50
		12		0,90	0,90
Vertically perforated clay, HLz DIN 105-100:2012 / EN 771-1:2011 e.g. Unipor Format: NF (240x115x71)		12	≥ 0,9	2,00	2,00
		8		1,50	1,50
		6		0,90	0,90
Sand-lime perforated brick, KSL DIN V 106:2005-10 / EN 771-2:2011 e.g. Unika Format: 4DF (248x115x238)		12	≥ 1,6	2,50	2,50
		10		2,00	2,00
		8		1,50	1,50
Sand-lime perforated brick, KSL DIN V 106:2005-10 / EN 771-2:2011 e.g. Unika Format: 8DF (248x240x238)		16	≥ 1,4	1,50	1,50
		12		1,20	1,20
		8		0,90	0,90
		6		0,60	0,60
Lightweight concrete hollow blocks, Hbl DIN 18151-100:2005-10 / EN 771-3:2011 e.g. Fa. Nüdling Format: 12DF (375x240x238)		10	≥ 1,2	1,20	1,20
		8		0,90	0,90
		6		0,75	0,75
		4		0,50	0,50
Partial safety factor γ _{Mm} ²⁾				2,5	

¹⁾ Characteristic resistance F_{Rk} for tension, shear or combined tension and shear loading.
The characteristic resistance is valid for single anchors or for a group of two or four anchors
with a spacing equal or larger than the minimum spacing s_{min} according to Table B4.1
Drilling method = Rotary drilling

²⁾ in the absence of other national regulations

EJOT SDF 10V und EJOT SDF 10H

Performances

Characteristic resistance in hollow or perforated masonry (SDF-10H)

Annex C 5

Table C6.1: Characteristic load bearing capacity $F_{Rk}^{1)}$ for pull-out failure in autoclaved aerated concrete

Autoclaved aerated concrete according to EN 771-4	Min. compressive strength f_b [N/mm ²]	Bulk density ρ [kg/dm ³]	$F_{Rk}^{1)}$ [kN]	$F_{Rk}^{1)}$ [kN]
			30°C – 50°C	50°C – 80°C
	4	500	1,5	1,5
	5	500	2,0	2,0
	6	650	2,5	2,0
	7	650	2,5 ³⁾	2,0 ³⁾
Partial safety factor $\gamma_{MAAC}^{2)}$			2,0	

1) Characteristic load-bearing capacity for tension, shear or combined tension and shear loading.
Drilling method = rotary drilling

2) In the absence of other national regulations

3) Values limited by the characteristic resistance in autoclaved aerated concrete with $f_b = 6$ N/mm²

EJOT SDF 10V und EJOT SDF 10H

Performances

Characteristic resistance in autoclaved aerated concrete (SDF-10H)

Annex C 6