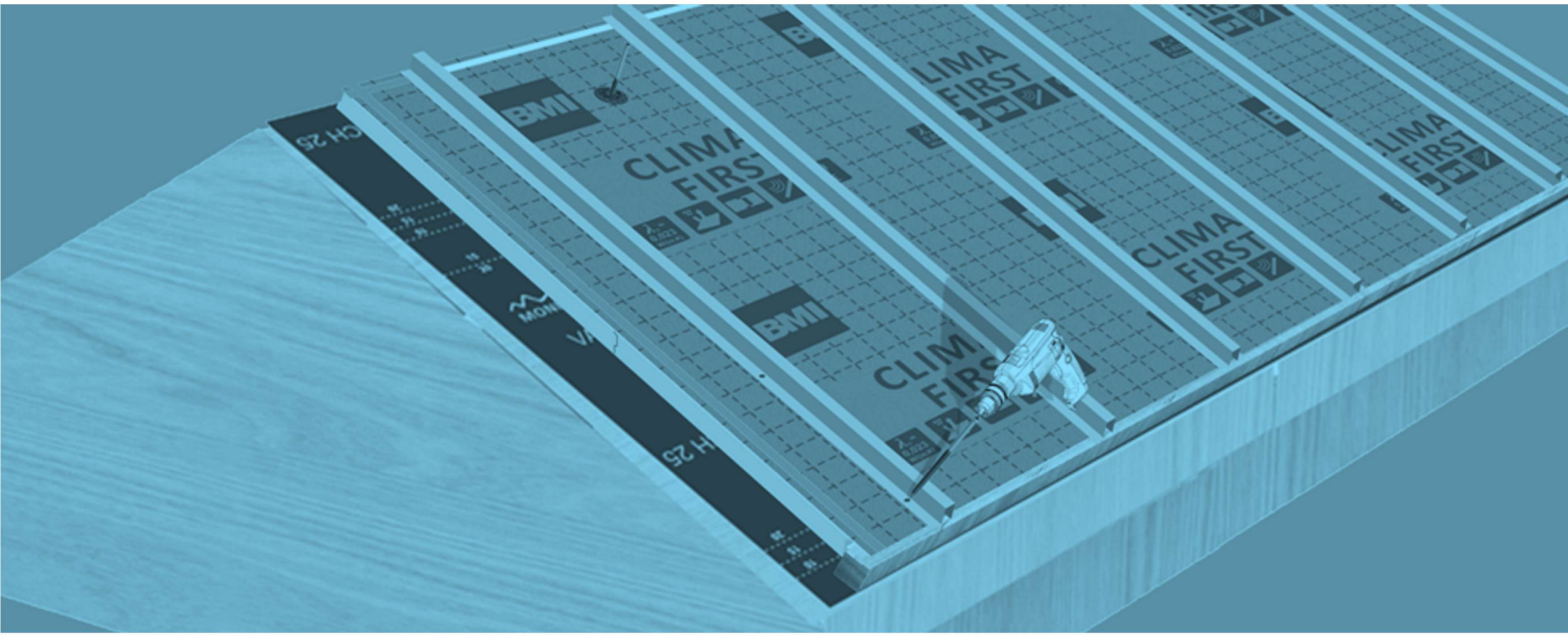


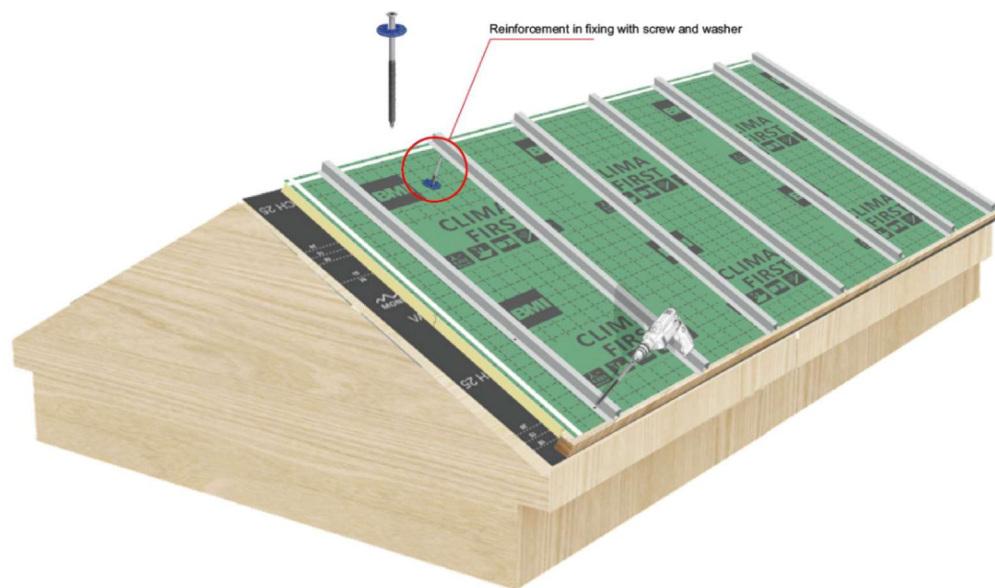
Panel PIR _ BMI

CLIMA FIRST

Tipo de fijaciones y rastreles

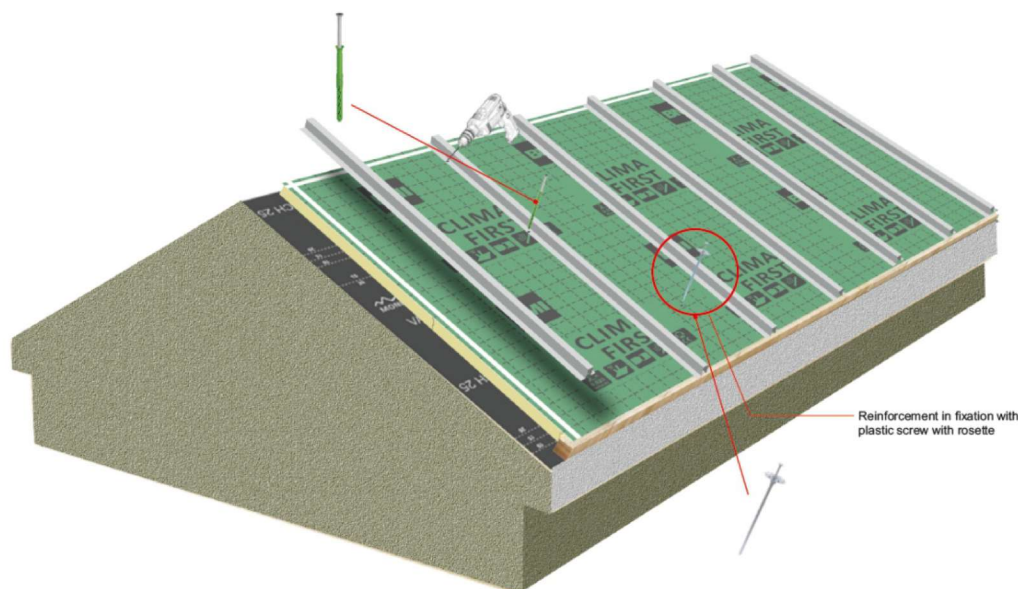
Febrero 2020





Arandela plástica IT Z 60 / 8K
(outer diameter 60 mm and inner 8 mm)
Made by EJOT (Germany)

Tornillo de madera JT2-ST-2-6.0 - 8x100/120/140/180/200 mm
Made by EJOT (Germany)



Taco de impacto o golpeo - SDF-Plus-8UB
8x120/160/180/200/240 mm
Made by EJOT (Germany)



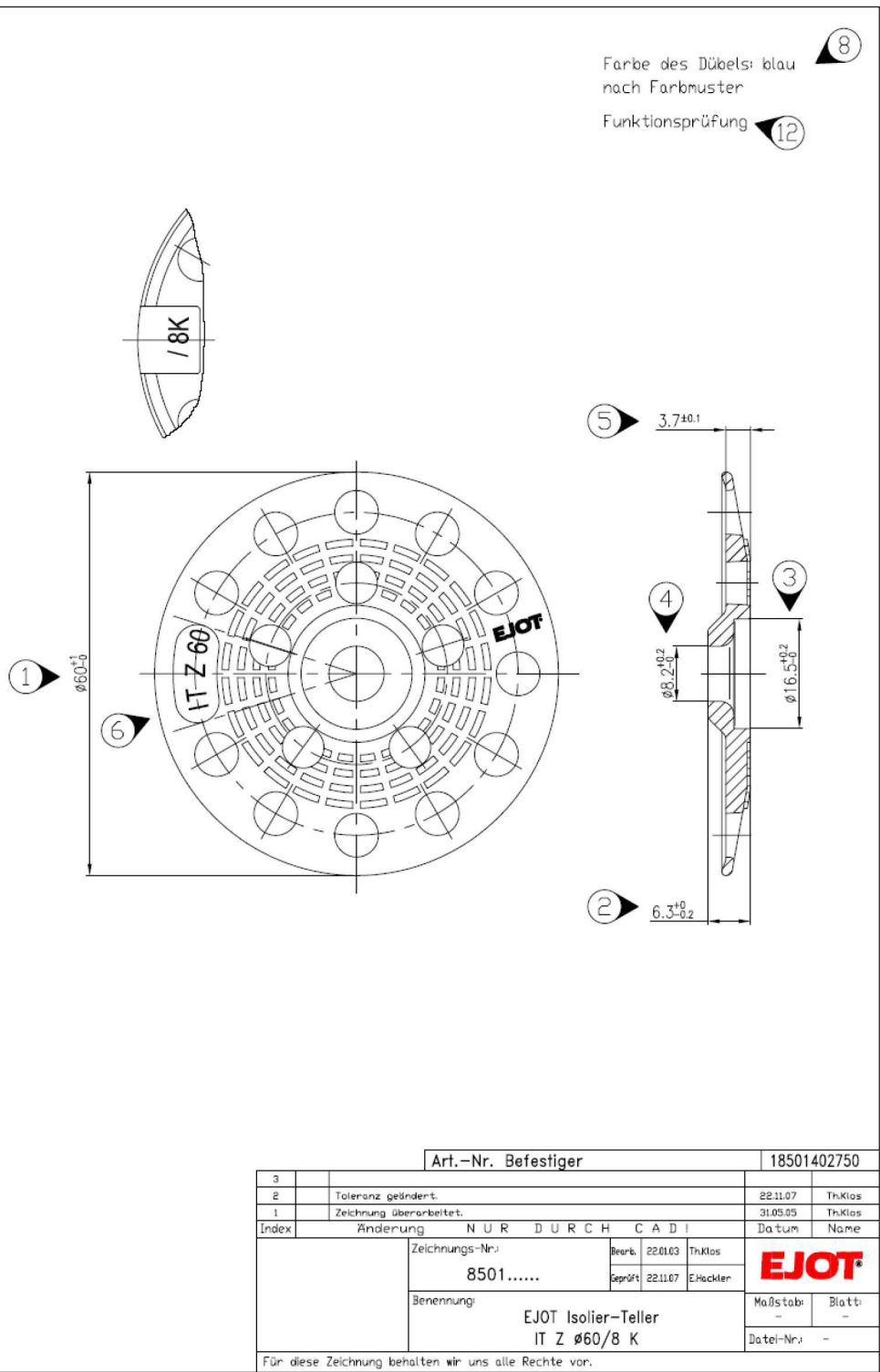
Taco con roseta para aislamiento Ejotharm H3
8x115/135/175 mm
Made by EJOT (Germany)



Tornillo fijación entre rastrel primario y secundario
SAPHIR JT2-6-5,5x22
Made by EJOT (Germany)

Clima First _ BMI

Arandela plástica



Clima First _ BMI

Fijación sobre base madera



Tornillo para madera JT2-ST-2-6.0 - 8x100/120/140/180/200 mm
Made by EJOT (Germany)



Self-drilling screws JF2/JT2
Case-hardened steel, zinc-plated

EJOT

Allgemeine bauaufsichtliche Zulassung
Nr. Z-14.4-028 vom 5. Dezember 2012

Deutsches Institut für Bautechnik **DIET**

JF2-2-6,0 x L JT3-X-2-6,0 x L JT3-2-6,0 x L

mit $R_{ax} = 1,5$ mm für JF2-2-6,0 x L, JF3-X-2-6,0 x L und JT3-2-6,0 x L

JT3-ST-2-6,0 x L / UG JT3-ST-2-6,0 x L

mit $R_{ax} = 1,5$ mm für JT3-ST-2-6,0 x L / UG

EJOT Bohrschrauben

Geometrie und Abmessungen der Bohrschrauben
JT2-ST-2-6,0 x L, JF2-2-6,0 x L, JT3-X-2-6,0 x L, JT3-2-6,0 x L, JT3-ST-2-6,0 x L, JT3-ST-2-6,0 x L / UG

Anlage 1

Z98302.12 1.14.4.0811

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Teléfono: +34 916 300 822 - Fax: +34 911 383 815 - info@ejot.es - www.ejot.es

EJOT® The Quality Connection

Self-drilling screws JF2/JT2
Case-hardened steel, zinc-plated

EJOT

Allgemeine bauaufsichtliche Zulassung
Nr. Z-14.4-028 vom 5. Dezember 2012

Deutsches Institut für Bautechnik **DIET**

JF2-2-6,0 x L JT3-X-2-6,0 x L JT3-2-6,0 x L

mit $R_{ax} = 1,5$ mm für JF2-2-6,0 x L, JF3-X-2-6,0 x L und JT3-2-6,0 x L

JT3-ST-2-6,0 x L / UG JT3-ST-2-6,0 x L

mit $R_{ax} = 1,5$ mm für JT3-ST-2-6,0 x L / UG

EJOT Bohrschrauben

Charakteristische Auszugtragfähigkeiten in kN für die Bohrschrauben
JT2-ST-2-6,0 x L, JF2-2-6,0 x L, JT3-X-2-6,0 x L, JT3-2-6,0 x L, JT3-ST-2-6,0 x L, JT3-ST-2-6,0 x L / UG

Anlage 8

Z98302.12 1.14.4.0811

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EJOT® The Quality Connection

Self-drilling screws JF2/JT2
Case-hardened steel, zinc-plated

EJOT

Allgemeine bauaufsichtliche Zulassung
Nr. Z-14.4-028 vom 5. Dezember 2012

Deutsches Institut für Bautechnik **DIET**

JF2-2-6,0 x L JT3-X-2-6,0 x L JT3-2-6,0 x L

mit $R_{ax} = 1,5$ mm für JF2-2-6,0 x L, JF3-X-2-6,0 x L und JT3-2-6,0 x L

JT3-ST-2-6,0 x L / UG JT3-ST-2-6,0 x L

mit $R_{ax} = 1,5$ mm für JT3-ST-2-6,0 x L / UG

EJOT Bohrschrauben

Charakteristische Auszugtragfähigkeiten in kN für die Bohrschrauben
JT2-ST-2-6,0 x L, JF2-2-6,0 x L, JT3-X-2-6,0 x L, JT3-2-6,0 x L, JT3-ST-2-6,0 x L, JT3-ST-2-6,0 x L / UG

Anlage 10

Z98302.12 1.14.4.0811

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EJOT® The Quality Connection



Tornillo fijación entre rastrel primario y secundario
SAPHIR JT2-6-5,5x22
Made by EJOT (Germany)

Clima First _ BMI

Fijación sobre base madera



Tornillo para madera JT2-ST-2-6.0 - 8x100/120/140/180/200 mm
Made by EJOT (Germany)

Self-drilling screws JF2/JT2
Case-hardened steel, zinc-plated

EJOT

Self-drilling screws JF2/JT2
Case-hardened steel, zinc-plated

EJOT

Algemeine bauaufsichtliche Zulassung
Nr. Z-14-428 vom 5. Dezember 2012

Deutsches Institut für Bautechnik **DIBt**

Art der Unterkonstruktion			R_k
OSB-Platte	$\rho_k \geq 550 \text{ kg/m}^3$	$t_{\text{min}} = 18 \text{ mm}$ (dann durchgeschraubt)	2,15 kN
Rauhspund $\geq$ C20 (Dachschalung)	$\rho_k \geq 330 \text{ kg/m}^3$	$t_{\text{min}} = 21 \text{ mm}$ (dann durchgeschraubt)	1,55 kN
Vollholz $\geq$ C24	$\rho_k \geq 350 \text{ kg/m}^3$	$t_{\text{min}} = 24 \text{ mm}$ $t_{\text{sp}} \geq 36 \text{ mm}$	1,88 kN 2,33 kN

Bauteil 1 aus Stahl oder Aluminium mit $t_b \geq 1,50 \text{ mm}$ und $R_{t,b} \geq 190 \text{ N/mm}^2$

EJOT Bohrschrauben
Charakteristische Querkrafttragfähigkeiten in kN für die Bohrschrauben
JT2-ST-2-6,0 x L; JT3-X-2-6,0 x L; JT3-2-6,0 x L; JT3-ST-2-6,0 x L; JT3-ST-2-6,0 x L/UG

ANlage 13

03/04/12 1.14.4-08/1

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EJOT® The Quality Connection

Algemeine bauaufsichtliche Zulassung
Nr. Z-14-428 vom 5. Dezember 2012

Deutsches Institut für Bautechnik **DIBt**

Charakteristische Tragfähigkeiten für Stahlunterkonstruktionen mit $R_{t,b,235} \geq 2350 \text{ N/mm}^2$ und Bauteilen aus Holz der Mindestsortierklasse S10/M510 je Verbindungselement bzw. Scherfuge Querkraft					
t_b	$F_{t,b}$	t_b	$F_{t,b}$	t_b	$F_{t,b}$
1 x 0,55 mm	0,66 kN	1 x 0,75 mm	1,74 kN	2 x 0,75 mm	2,18 kN
1 x 0,63 mm	0,80 kN	1 x 0,88 mm	1,82 kN	2 x 0,88 mm	2,24 kN
1 x 0,75 mm	1,05 kN	1 x 1,00 mm	1,90 kN	2 x 1,00 mm	2,34 kN
2 x 1 x 0,88 mm 2 x 0,75 mm	1,21 kN	1 x 1,13 mm	1,99 kN		
		1 x 1,25 mm	2,07 kN		
		1 x 1,50 mm	2,21 kN		

Bei unteren Unterkonstruktionen (S_{10} , C oder L-Profil) sind die eingetragenen Werte $F_{t,b}$ um 30% zu reduzieren.

EJOT Bohrschrauben
Charakteristische Tragfähigkeiten von Holz-Stahlblech-Verbindungen für die Bohrschrauben
JT2-ST-2-6,0 x L; JT3-X-2-6,0 x L; JT3-2-6,0 x L; JT3-ST-2-6,0 x L; JT3-ST-2-6,0 x L/UG

ANlage 14

03/04/12 1.14.4-08/1

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Tornillo fijación entre rastrel primario y secundario
SAPHIR JT2-6-5,5x22
Made by EJOT (Germany)

Clima First _ BMI

Fijación sobre base hormigón



Taco de impacto o golpeo - SDF-Splus-8UB
8x120/160/180/200/240 mm
Made by EJOT (Germany)



Deutsches Institut für Bautechnik



Member of EOTA

Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Länder Governments



Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment

ETA-15/0231

of 21 July 2015

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:

Trade name of the construction product

Product family to which the construction product belongs

Manufacturer

Manufacturing plant

This European Technical Assessment contains

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

Deutsches Institut für Bautechnik

EJOT SDF-K/-S plus 8UB

Plastic anchor for multiple use in concrete and masonry for non-structural applications

EJOT Baubefestigungen GmbH
In der Stockwiese 35
57334 Bad Laasphe
DEUTSCHLAND

EJOT Herstellwerk 1, 2, 3 und 4
manufacturing plant EJOT 1, 2, 3 and 4

14 pages including 3 annexes which form an integral part of this assessment

Guideline for European technical approval of "Plastic Anchors for Multiple Use in Concrete and Masonry for Non", ETAG 020 structural Applications - Part 1: "General", Edition March 2012, used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011.

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25/1201.15

8.08.04-125/15



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Page 2 of 14 | 21 July 2015

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European Technical Assessment

ETA-15/0231

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Page 3 of 14 | 21 July 2015

Specific part

1 Technical description of the product

The EJOT frame fixing SDF-K plus 8UB and SDF-S plus 8UB 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 anchor 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 Mechanical resistance and stability (BWR 1)

The essential characteristics regarding mechanical resistance and stability are included under the Basic Works Requirement Safety in use.

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Anchors satisfy requirements for Class A 1
Resistance to fire	No performance assessed

3.3 Hygiene, health and the environment (BWR 3)

Regarding dangerous substances there may be requirements (e.g. transposed European legislation and national laws, regulations and administrative provisions) applicable to the products falling within the scope of the European Technical Assessment. In order to meet the provisions of Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for tension and shear loads	See Annex C 1, C 2
Characteristic resistance for bending moments	See Annex C 1
Displacements under shear and tension loads	See Annex C 1
Anchor distances and dimensions of members	See Annex B 2, B 3

25/1201.15

8.08.04-125/15

Clima First _ BMI

Fijación sobre base hormigón



Taco de impacto o golpeo - SDF-S plus-8UB

8x120/160/180/200/240 mm

Made by EJOT (Germany)

European Technical Assessment
ETA-15/0231
English translation prepared by DIBt

Page 4 of 14 | 21 July 2015

3.5 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was determined for this product.

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

In accordance with guideline for European technical approval ETAG 020, March 2012 used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011 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 21 July 2015 by Deutsches Institut für Bautechnik

Uwe Bender
Head of Department

beglaubigt:
Ziegler

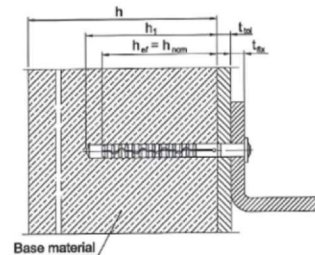
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Page 5 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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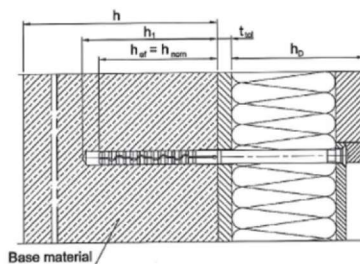
EJOT SDF-K plus 8UB



SDF-K plus Ø8UB

Base material

EJOT SDF-S plus 8UB



SDF-S plus Ø8UB

Base material

Legend:
 h_0 = thickness of insulation material
 h_{nom} = overall anchor embedment depth in the base material
 h = thickness of member (wall)
 h_1 = depth of drilled hole to deepest point
 h_2 = thickness of equalizing layer or non-load-bearing coating
 h_3 = thickness of fixture

EJOT SDF-K-S plus 8UB

Product description
Installed condition

Annex A 1

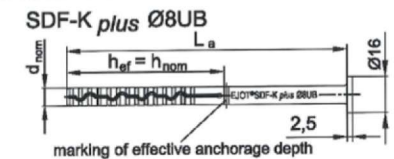
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Page 6 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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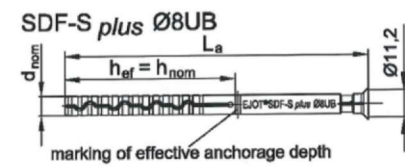
Anchor sleeve: head collar version



marking of effective anchorage depth

Anchor marking:
manufacturer, anchor type incl. head type, diameter, length
Example: EJOT SDF-K plus Ø8UB x L_a

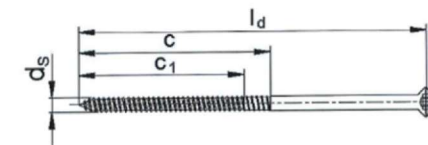
Anchor sleeve: Countersunk version



marking of effective anchorage depth

Anchor marking:
manufacturer, anchor type incl. head type, diameter, length
Example: EJOT SDF-S plus Ø8UB x L_a

Specific screw



Screw head

EJOT SDF-K-S plus 8UB

Product description
Marking and dimension of the anchor sleeve
Specific screw

Annex A 2

Z42431.15

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Taco de impacto o golpeo - SDF-Splus-8UB

8x120/160/180/200/240 mm

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Page 10 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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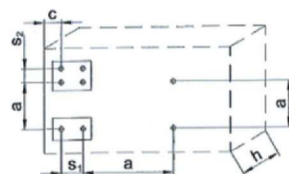


Tabelle B3: Minimum thickness of member, edge distance and spacing in solid and hollow brick

SDF-K/-S plus 8UB	Minimum thickness of member	Minimum edge distance	Minimum spacing	
	h_{min} [mm]	c_{min} [mm]	vertical to edge $s_{1,min}$ [mm]	parallel to edge $s_{2,min}$ [mm]
Clay brick, Mz (DIN 105-100:2012-01 / EN 771-1:2011)	115	30	60	120
Calcium silicate solid brick, KS (DIN V 106:2005-10 / EN 771-2:2011)	175	30	60	120
Vertically perforated clay bricks, Htz (DIN 105-100:2012-01 / EN 771-1:2011)	175	100	100	100
Hollow calcium silicate brick, KSL (DIN V 106:2005-10 / EN 771-2:2011)	175	100	100	100
Hollow brick lightweight concrete, Hbl (DIN V 18151-100:2005-10 / EN 771-3:2011)	300	100	100	100

$a \geq \max(250 \text{ mm}; s_{1,min}; s_{2,min})$

Scheme of distance and spacing in masonry



EJOT SDF-K/-S plus 8UB

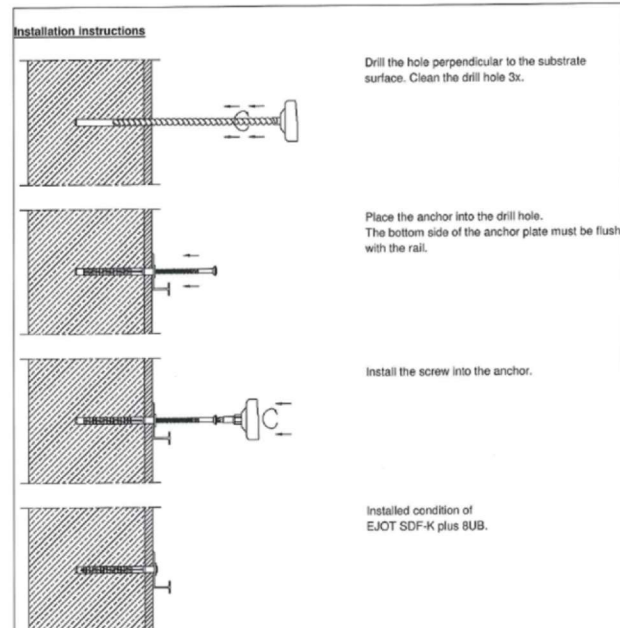
Intended use
Distance and spacing for use in masonry

Annex B 3

Z42431.15

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Page 11 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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EJOT SDF-K/-S plus 8UB

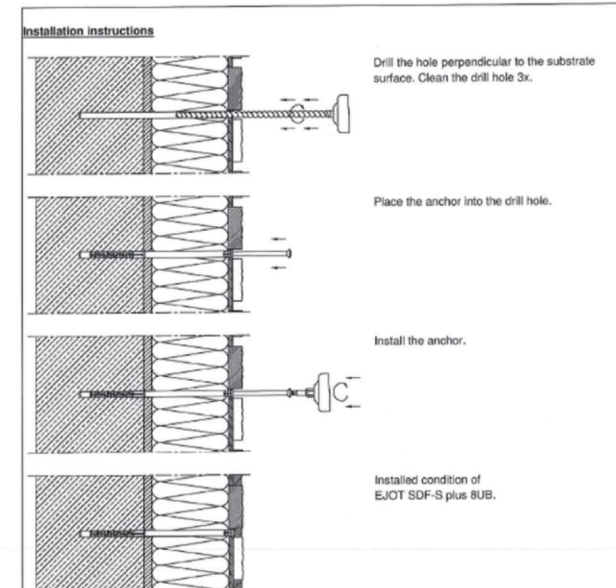
Intended use
Installation instructions EJOT SDF-K plus 8UB

Annex B 4

Z42431.15

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Page 12 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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EJOT SDF-K/-S plus 8UB

Intended use
Installation instructions EJOT SDF-S plus 8UB

Annex B 5

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Taco de impacto o golpeo - SDF-Splus-8UB

8x120/160/180/200/240 mm

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Page 13 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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Table C1: Characteristic resistance of the screw			
Failure of expansion element		SDF-K/-S plus 8UB	
Base materials		Galvanised steel	Stainless steel
Characteristic tension resistance	$N_{tR,k}$ [kN]	11,3	13,2
Characteristic shear resistance	$V_{tR,k}$ [kN]	6,4	7,4
Characteristic bending resistance	$M_{bR,k}$ [Nm]	9,9	11,6

Table C2: Characteristic resistance for pullout failure ¹⁾ for use in concrete ≥ C16/20		
SDF-K/-S plus 8UB		
Temperature range		
30 / 50 °C		
Characteristic tension resistance	$N_{tR,k}$ [kN]	1,5
¹⁾ drill method: hammer drilling		

Table C3: Displacements ²⁾ under tension and shear loading in concrete and masonry						
Anchor Type	Tension load	Displacements under tension load		Shear load	Displacements under shear load	
	F [kN]	δ_{tD} [mm]	δ_{tP} [mm]	F [kN]	δ_{vD} [mm]	δ_{vP} [mm]
SDF-K/-S plus 8UB	0,6	0,26	0,52	2,2	1,04	1,56

²⁾ intermediate values by linear interpolation

EJOT SDF-K/-S plus 8UB

Performances
Characteristic resistance of the screw, characteristic resistance for use in concrete,
Displacements in concrete and masonry

Annex C 1

Z42431.15

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Page 14 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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Table C4: Characteristic resistance F_{tR} for use in solid or perforated masonry					
Anchor Type					SDF-K/-S plus 8UB
Base materials	Bulk Density class ρ [kg/dm ³]	minimum compressive strength f_b [N/mm ²]	min. format or min. size (L x W x H) [mm]	Drilling method ¹⁾	F_{tR} [kN]
solid masonry					
Clay brick, Mz e.g. according to DIN 105-100:2012-01 / EN 771-1:2011	≥ 1,8	36	NF (240 x 115 x 71)	H	3,5
Calcium silicate solid brick, KS e.g. according to DIN V 106:2005-10 / EN 771-2:2011	≥ 1,8	28	3 DF (240 x 175 x 113)	H	3,5
perforated masonry					
Vertically perforated clay bricks, Hlz e.g. according to DIN 105-100:2012-01 / EN 771-1:2011 (picture 1)	≥ 0,75	12	12 DF (498 x 175 x 238)	R	0,75
Hollow calcium silicate brick, KSL e.g. according to DIN V 106:2005-10 / EN 771-2:2011 (picture 2)	≥ 1,4	20	6 DF (248 x 175 x 248)	R	2,5
Hollow brick lightweight concrete, Hbl e.g. according to DIN V 18151-100:2005-10/ EN 771-3:2011 (picture 3)	≥ 0,9	4	10 DF (247 x 300 x 249)	R	0,9

¹⁾ H = Hammer drilling / R = Rotary drilling

EJOT SDF-K/-S plus 8UB

Performances
Characteristic resistance for use in solid or perforated masonry

Annex C 2

Z42431.15

6.06.04-125/15



Taco de impacto o golpeo - SDF-Splus-8UB
8x120/160/180/200/240 mm
Made by EJOT (Germany)

Page 7 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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Table A1: Dimensions								
Anchor Type	Anchor sleeve				Specific screw			
	d_{nom} [mm]	h_{nom} [mm]	min L_A [mm]	max L_A [mm]	l_f [mm]	d_s [mm]	c_1 [mm]	c [mm]
SDF-K/-S plus 8UB	8	70	80	300	$L_A + 8mm$	5,5	60	70

Table A2: Materials	
Name	Materials
Anchor sleeve	Polyamide, PA 6 colour: green
Specific screw	Steel, electrogalvanized $\geq 5 \mu m$ according to EN ISO 4042, blue passivated $f_{yk} = 480 N/mm^2$, $f_{tk} = 600 N/mm^2$ stainless steel according EN 10088-3:2014 $f_{yk} = 450 N/mm^2$, $f_{tk} = 700 N/mm^2$ material number 1.4401 or 1.4571 material number 1.4301 or 1.4567

EJOT SDF-K/-S plus 8UB	Annex A 3
Product description Dimensions of the anchor sleeve and the specific screw Materials	

Z42431.15

8.06.04-125/15

Page 8 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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Specifications of intended use	
Anchorage subject to:	- Static and quasi-static loads. - Multiple fixing of non-structural applications
Base materials:	- Reinforced or unreinforced normal weight concrete with strength classes $\geq C12/15$ (use category a) according to EN 206-1:2000, Annex C 1. - Solid brick masonry (use category b) according to Annex C 2. - Note: The characteristic resistance is also valid for larger brick sizes and higher compressive strength of the masonry unit. - Hollow brick masonry (use category c) according to Annex C 2. - Mortar strength class of the masonry $\geq M2,5$ according to EN 998-2:2010. - For other base materials of the use categories a, b or c 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)
Use conditions (Environmental conditions):	- Structures subject to dry internal conditions (zinc coated steel, stainless steel) - The specific screw made of galvanised steel may also be used in structures 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). - 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 to be designed in accordance with the ETAG 020, Annex C 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 considered as single anchors.
Installation:	- Hole drilling by impact method. - Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters. - Installation temperature $\geq 5^\circ C$. - Exposure to UV due to solar radiation of the anchor not protected ≤ 6 weeks

EJOT SDF-K/-S plus 8UB	Annex B 1
Intended use Specifications	

Z42431.15

8.06.04-125/15

Page 9 of European Technical Assessment
ETA-15/0231 of 21 July 2015
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Table B1: Installation Parameters					
Anchor Type	SDF-K/-S plus 8UB				
Drill hole diameter	d_b [mm]	=	8		
Cutting diameter of drill bit	d_{cut} [mm]	$\leq$	8,45		
Depth of drill hole to deepest point	h_1 [mm]	$\geq$	80		
Overall anchor embedment depth in the base material	h_{nom} [mm]	$\geq$	70		
Diameter of clearance hole in the fixture	d_f [mm]	$\leq$	8,5		
Minimum temperature during setting process	T [°C]	=	0		
Temperature range (c)	T [°C]	=	+ 30 / + 50		

Table B2: Minimum thickness of member, edge distance and spacing in concrete					
Anchor Type	Characteristic edge distance and spacing		Minimum edge distance and spacing		Minimum thickness of member
SDF-K/-S plus 8UB	$c_{ed,N}$	$s_{ed,N}$	c_{min}	s_{min}	t_{min}
	[mm]	[mm]	[mm]	[mm]	[mm]
Concrete C 20/25	60	75	80	50	120

Fixing points with a spacing $a \leq s_{ed,N}$ are considered as a group with a max. characteristic resistance $N_{Rk,g}$ acc. to Table C3. For a spacing $a > s_{ed,N}$ the anchors are considered as single anchors, each with a characteristic resistance $N_{Rk,g}$ acc. to Table C3.

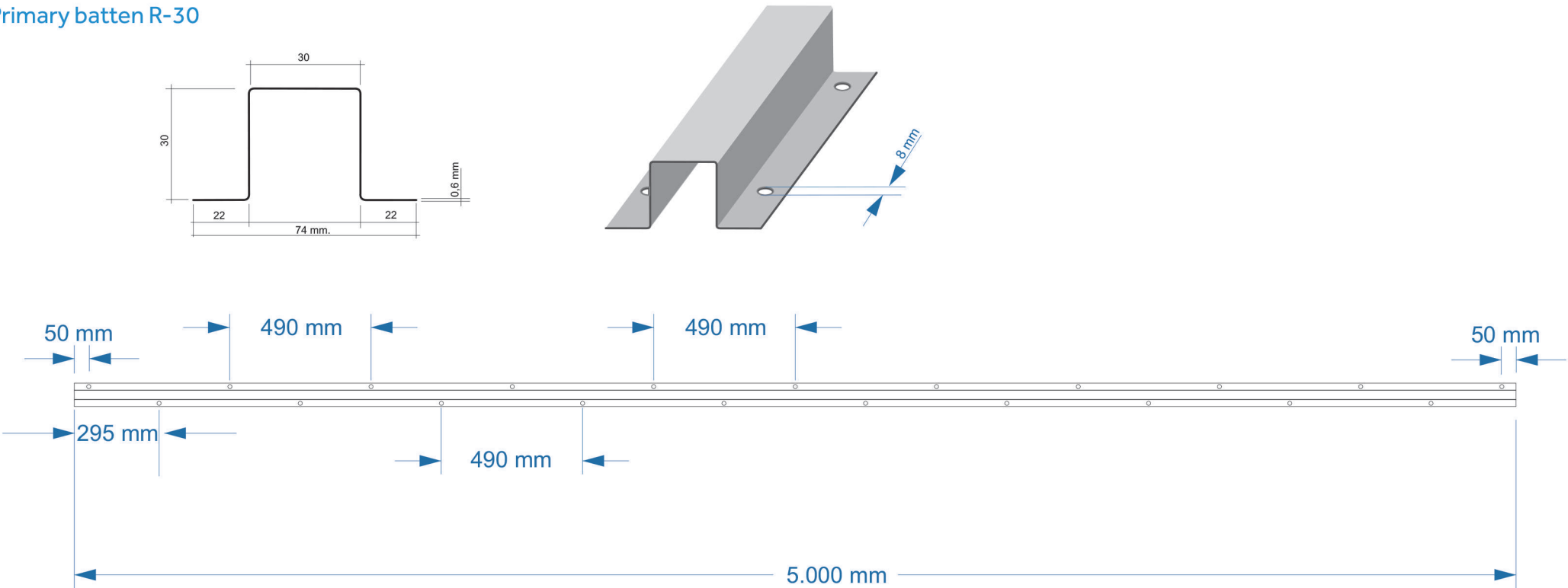
Scheme of distance and spacing in concrete

EJOT SDF-K/-S plus 8UB	Annex B 2
Intended use Installation parameters, Distance and spacing for use in concrete	

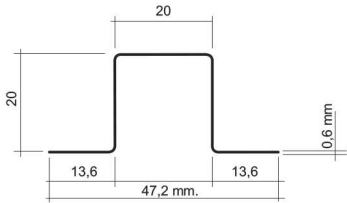
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Primary batten R-30



Secondary batten R-20



Primary batten R-30

FICHA TÉCNICA DE PRODUCTO: PERFIL "OMEGA 30-30"



DESCRIPCIÓN:

Perfil de acero galvanizado sometido a un proceso de laminación en frío para su conformado.

APLICACIÓN:

Perfil metálico con forma de "Ω", utilizado en el sistema constructivo de cubiertas.

La función principal de los perfiles Omega es generar una estructura capaz de alojar el aislante y servir como soporte para los distintos tipos de teja, realizando las uniones mediante atornillado o remachado.

PRINCIPAL CARACTERÍSTICA:

Conseguir una mayor impermeabilidad, imposibilitando el paso de agua y humedades, y un mayor aislamiento térmico frente a las inclemencias atmosféricas.

CARACTERÍSTICAS MATERIAL:

Características	Descripción	Valor	Normativa
Material	Acero galvanizado bajo en carbono	-	UNE - EN 10346
Grado de dureza	DX 51 D	-	
Recubrimiento	ZINC (Z)	-	
Recubrimiento mínimo	Z - 140 g/m ²	-	UNE - EN 10143
Reacción al Fuego	A 1 - No combustible	-	
Límite Elástico	Re, N/mm ²	≥ 140	
Resistencia a tracción	RM, N/mm ²	≥ 270	UNE - EN 10143
Alargamiento hasta rotura	A ₅₀	≥ 22 %	

PRESENTACIÓN DE PRODUCTO:

Producto	Longitud (metros)	Unidades / Paquete	Unidades / Palé	Metros / Palé
Omega 30-30 * 0,6 mm.	3,00	10	200	600
Omega 30-30 * 0,8 mm.	5,00	10	200	1.000
Omega 30-30 * 1,0 mm.	5,00	10	200	1.000

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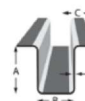


FICHA TÉCNICA DE PRODUCTO: PERFIL "OMEGA 30-30"

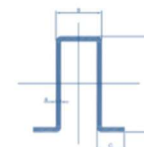


CARACTERÍSTICAS PRODUCTO:

	Características	Valores	Tolerancias	Normativa
Omega 30-30	Espesor "E" (mm)	0,60	± 0,05	UNE - EN 10143
	Cota "A" (mm)	31	± 0,50	
	Cota "B" (mm)	30	± 0,50	
	Cota "C" (mm)	18	± 0,75	
	Peso (Kg./m.L.)	0,576	-	
	Espesor "E" (mm)	0,80	± 0,06	
	Cota "A" (mm)	31	± 0,50	
	Cota "B" (mm)	30,5	± 0,50	
	Cota "C" (mm)	18	± 0,75	
	Peso (Kg./m.L.)	0,768	-	
	Espesor "E" (mm)	1,00	± 0,07	UNE - EN 10162
	Cota "A" (mm)	31,5	± 0,50	
	Cota "B" (mm)	30,5	± 0,50	
Longitud	Cota "C" (mm)	18	± 0,75	
	Peso (Kg./m.L.)	0,960	-	
	Dimensión angular	-	± 2°	
Longitud		≤ 3.000 mm	± 3 mm	
		De 3.000 a 5.000mm	± 4 mm	
		> 5.000	± 5 mm	



CARACTERÍSTICAS MECÁNICAS:



	Omega 30x30*0,6	Omega 30x30*0,8	Omega 30x30*1,0
Área (mm ²)	72	96	120
Peso (Kg./m.L.)	0,576	0,768	0,960
Momentos de Inercia (cm ⁴)	Ix: 1,08	1,44	1,80
	Iy: 1,89	2,52	3,15
Módulo de torsión (cm ⁴)	Iz: 0,000864	0,00205	0,004

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OFICINA Y ALMACÉN:
Polígono Industrial Prado Overa
C/.Puerto Cañadas del Teide,
Nave 47 y 49
28919 LEGANÉS (Madrid)
Teléf.: 91 500 15 12
Fax: 91 392 01 33

25 de junio de 2015

A/AT. : Dpto.Calidad – COBERT TEJAS CERAMICAS, S.L.

SUBJECT: QUALITY CERTIFICATE

PERFILES BLANCO, S.L. as manufacturer of Industrial Profiles, for Roofs, Partitions, Lightened Structure, etc., DECLARES: that our manufactured products adapt to the existing standards in the Spanish and European Market, both in sheet metal qualities and in profile measurements, which are manufactured in roll forming machines with fixed rollers, which keep the measurements constant.

Our raw material supplied (quality certificates are attached) by the main National Market Laminators, which are based on the Standard UNE-36130-EURONORMA-142 and NORMA A.S.T.M.A - 525-83.

On the basis of these certificates, the following materials have been manufactured

"O-20-20-06" "O-30-30-06"

Without more, being at your disposal for any question, receive a cordial greeting.

Quality Department



PERFILES BLANCO, S.L.
P. I. PRADO OVERA
C/. Pto. Cañadas del Teide, Naves 47-49
28919 LEGANÉS (Madrid)

PERFILES BLANCO, S.L.

Secondary batten R-20

FICHA TÉCNICA DE PRODUCTO: PERFIL "OMEGA 20-20"



DESCRIPCIÓN:

Perfil de acero galvanizado sometido a un proceso de laminación en frío para su conformado.

APLICACIÓN:

Perfil metálico con forma de "Ω", utilizado en el sistema constructivo de cubiertas.

La función principal de los perfiles Omega es generar una estructura capaz de alojar el aislante y servir como soporte para los distintos tipos de teja, realizando las uniones mediante atornillado o remachado.

PRINCIPAL CARACTERÍSTICA:

Conseguir una mayor impermeabilidad, imposibilitando el paso de agua y humedades, y un mayor aislamiento térmico frente a las inclemencias atmosféricas.

CARACTERÍSTICAS MATERIAL:

Características	Descripción	Valor	Normativa
Material	Acero galvanizado bajo en carbono	-	UNE - EN 10346
Grado de dureza	DX 51 D	-	
Recubrimiento	ZINC (Z)	-	
Recubrimiento mínimo	Z = 200 g/m ²	-	
Reacción al Fuego	A 1 - No combustible	-	UNE - EN 10143
Límite Elástico	Re, N/mm ²	≥ 140	
Resistencia a tracción	RM, N/mm ²	≥ 270	
Alargamiento hasta rotura	A ₅₀	≥ 22 %	

PRESENTACIÓN DE PRODUCTO:

Producto	Longitud (mm)	Unidades / Paquete	Unidades / Palé	Metros / Palé
Omega 20-20 * 0,5 mm.	3.000	10	200	600
	5.000	10	200	1.000
Omega 20-20 * 0,6 mm.	3.000	10	200	600
	5.000	10	200	1.000
Omega 20-20 * 0,8 mm.	5.000	10	200	1.000

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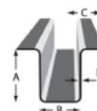


FICHA TÉCNICA DE PRODUCTO: PERFIL "OMEGA 20-20"



CARACTERÍSTICAS PRODUCTO:

		Características	Valores	Tolerancias	Normativa
Omega 20-20 	Espeor "E" (mm)		0,50	± 0,05	UNE - EN 10143
	Cota "A" (mm)		20,5	± 0,50	
	Cota "B" (mm)		20	± 0,50	
	Cota "C" (mm)		14	± 0,75	
	Peso (Kgr./m.l.)		0,336		UNE - EN 10162
	Espeor "E" (mm)		0,60	± 0,05	
	Cota "A" (mm)		20,5	± 0,50	
	Cota "B" (mm)		20,5	± 0,50	
	Cota "C" (mm)		15	± 0,75	
	Peso (Kgr./m.l.)		0,403		
	Espeor "E" (mm)		0,80	± 0,06	
	Cota "A" (mm)		21	± 0,50	
Cota "B" (mm)		20,5	± 0,50		
Cota "C" (mm)		15	± 0,75		
Peso (Kgr./m.l.)		0,538			
		Dimensión angular		± 2°	
		Longitud	≤ 3.000 mm De 3.000 a 5.000mm > 5.000	± 3 mm +4 mm ± 5 mm	



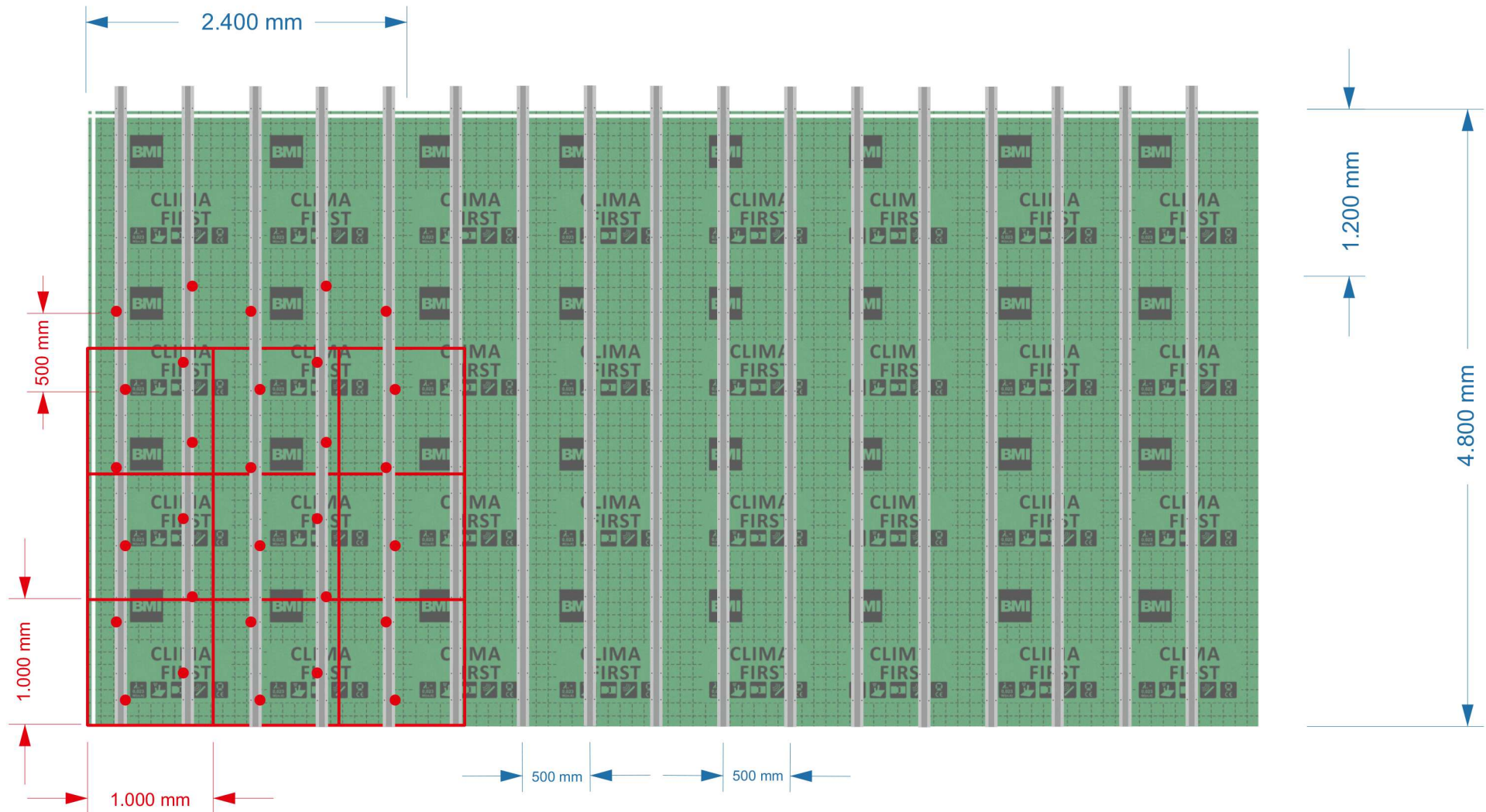
CARACTERÍSTICAS MECÁNICAS:



	Omega 20x20*0,5	Omega 20x20*0,6	Omega 20x20*0,8
Área (mm ²)	45	54	72
Peso (Kg/m.l.)	0,336	0,403	0,538
Momentos de Inercia (cm ⁴)	Ix: 0,31	0,37	0,50
	Iy: 0,72	0,87	1,15
Módulo de torsión (cm ⁴)	Iz: 0,000375	0,000648	0,001154

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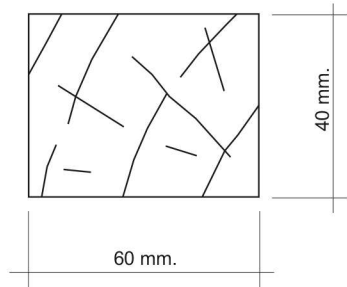




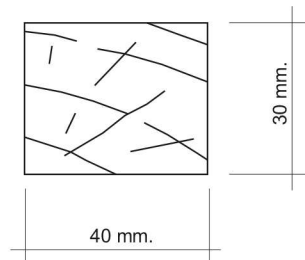
Rastrel primario a 500 mm: **4 fijaciones/m²**

Recomendación Interna MRC 1,5

Rastrel primario de madera*

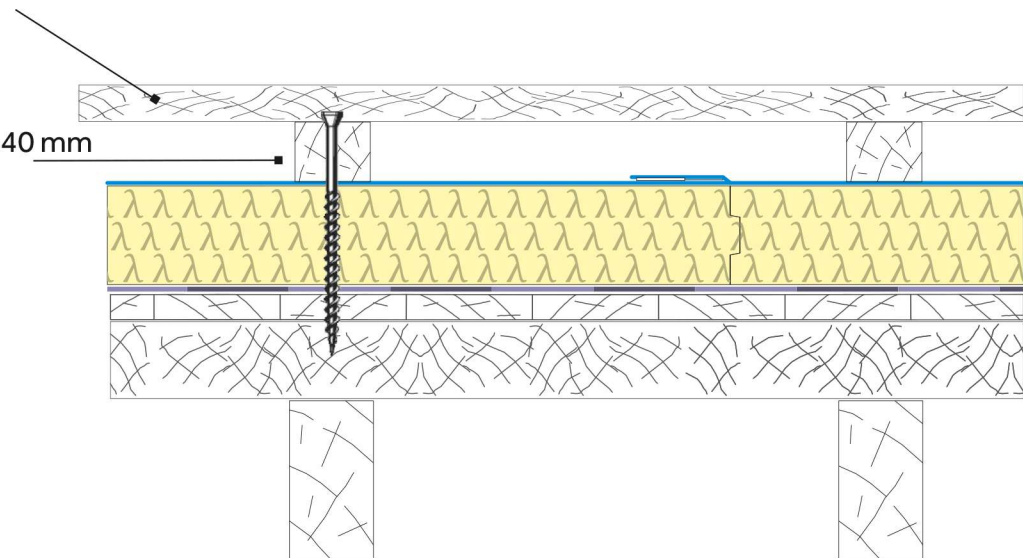


Rastrel secundario de madera*



Rastrel secundario madera 40x30 mm

Rastrel primario madera 60x40 mm



* Battens not marketed by BMI

rastrel marketed by

TIPOS DE FIJACIÓN POR ESPESOR Y TIPO DE RASTREL

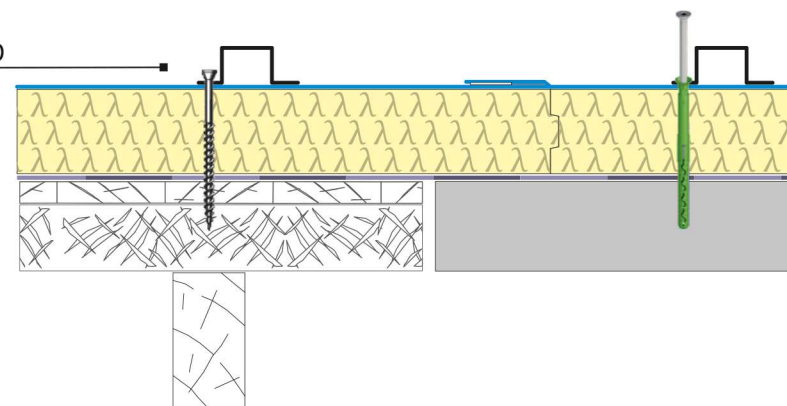
Espesor Aislamiento	Forjado	Tipo de rastrel	Largo anclaje	Tipo anclaje	Código de Producto
70 mm	Madera	Metálico	100 mm	JT2-ST-2-6.0	7044191
		Madera	140 mm	JT2-ST-2-6.0	7044192
	Hormigón	Metálico	120 mm	SDF-Splus-8UB	7044185
		Hormigón	160 mm	SDF-Splus-8UB	7044186
100 mm	Madera	Metálico	140 mm	JT2-ST-2-6.0	7044192
		Madera	180 mm	JT2-ST-2-6.0	7044193
	Hormigón	Metálico	160 mm	SDF-Splus-8UB	7044186
		Hormigón	180 mm	SDF-Splus-8UB	7044187

Wood screw JT2-ST-2-6.0
100/120/140/180/200 mm
Made by EJOT (Germany)

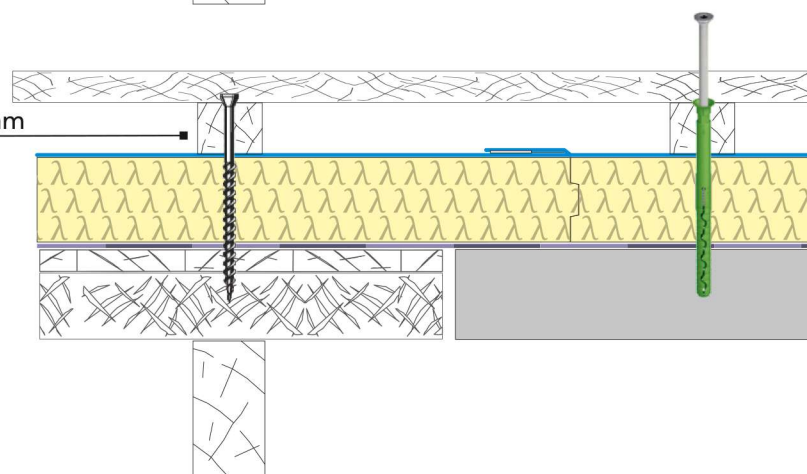


Expansive impact screw - SDF-Splus-8UB
8x120/160/180/200/240 mm
Made by EJOT (Germany)

Rastrel primario R-30



Rastrel primario madera 60x40 mm

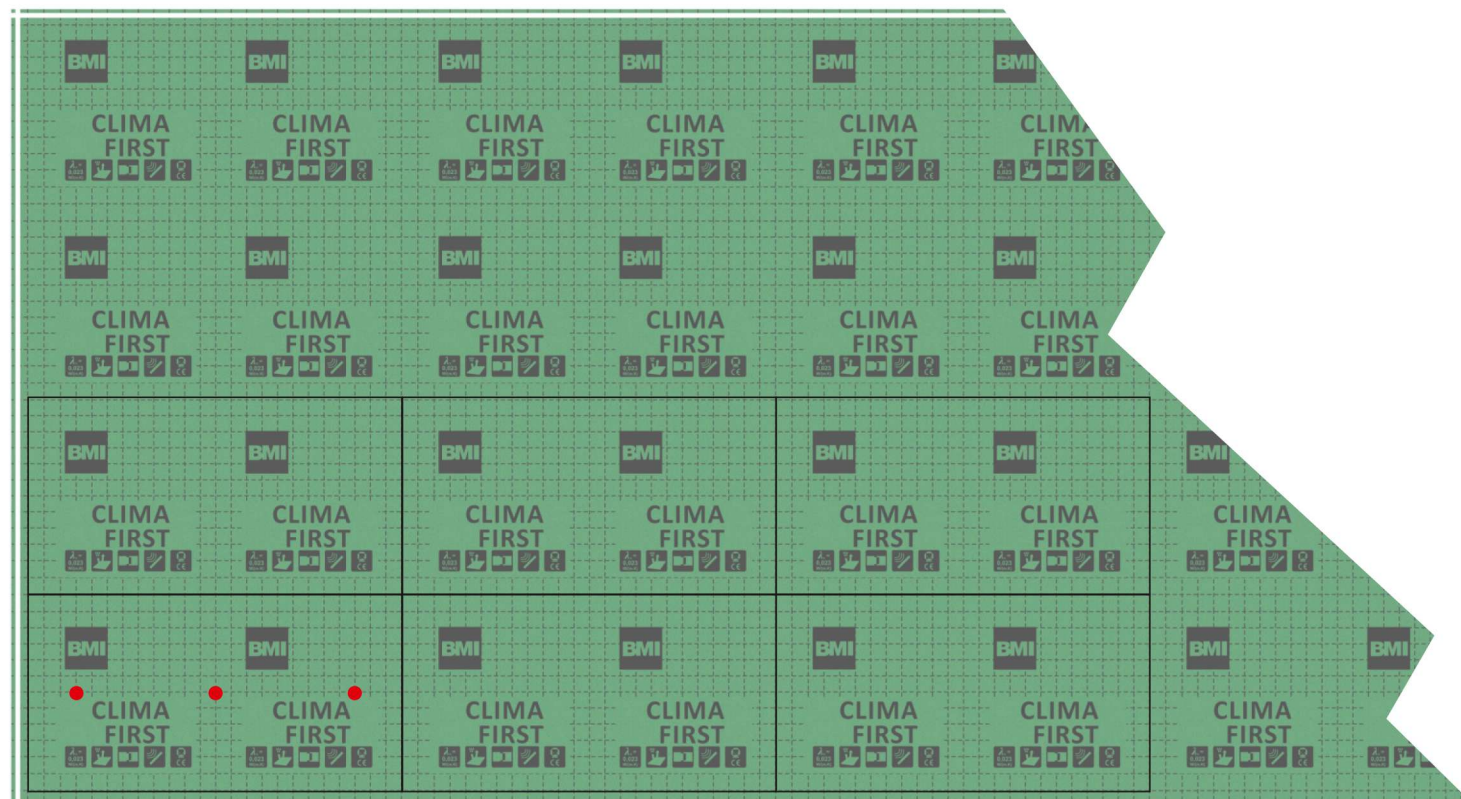
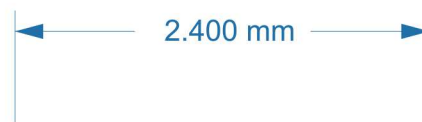


TIPOS DE FIJACIÓN POR ESPESOR Y TIPO DE RASTREL

PENDIENTES SUPERIORES A 45° - 100%

Recomendamos reforzar los puntos de fijación en pendientes superiores a 45° con tres puntos adicionales de anclaje con:

- 1 - Taco con roseta para aislamiento - en el caso de forjado de hormigón
- 2 - Arandela plástica + tornillo para madera - en el caso de base de madera



Puntos de anclaje adicionales por placa de Clima First (241 x 121 cm)
para pendientes superiores a 45°