

Sika AnchorFix[®]-2+

DECLARATION OF PERFORMANCE No. 88587701

1	UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE:	88587701
2	INTENDED USE/S	ETA-13/0779 of 07/10/2016 Post installed rebar connections of the sizes 8 to 32 mm injection mortar.
3	MANUFACTURER:	Sika Services AG Tüffenwies 16-22 8064 Zürich
4	AUTHORISED REPRESENTATIVE:	
5	SYSTEM/S OF AVCP:	System 1
6b	EUROPEAN ASSESSMENT DOCUMENT:	„Metal Anchors for use in Concrete“, ETAG 001, Part 1 ‘Anchors in general’, Part 5 ‘Bonded anchors’ 2008.
	European Technical Assessment:	ETA-13/0779 of 07/10/2016
	Technical Assessment Body:	TECHNICKY A ZKUSEBNI USTAV STAVEBNI PRAHA s.p.
	Notified body/ies:	1020

Declaration of Performance

Sika AnchorFix[®]-2+
88587701
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7 DECLARED PERFORMANCE/S

Reaction to fire - Anchorages satisfy requirements for Class A1

Resistance to fire - No performance assessed

Anchorage subject to:

- Static and quasi-static load.

Base materials

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2000-12
- Strength classes C12/15 to C50/60 according to EN 206-1:2000-12.
- Maximum chloride concrete of 0,40% (CL 0.40) related to the cement content according to EN 206-1:2000-12.
- Non-carbonated concrete.

Note: In case of a carbonated surface of the existing concrete structure the carbonated layer shall be removed in the area of the post installed rebar connection (with a diameter $d_s + 60$ mm) prior to the installation of the new rebar. The depth of concrete to be removed shall correspond to at least minimum concrete cover in accordance with EN 1992-1-1:2004.

The foregoing may be neglected if building components are new and not carbonated.

Temperature range:

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

Use conditions (Environmental conditions)

- The rebars may be installed in dry or wet concrete.

Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the forces to be transmitted.
- Design according to EN 1992-1-1:2004
- The position of the reinforcement in the existing structure shall be determined on the basis of the construction documentation and taken into account when designing.

Installation:

- Dry or wet concrete.
- It must not be installed in flooded holes.
- Hole drilling by hammer drill or compressed air drill mode.
- The installation of post-installed rebars shall be done only by suitable trained installer and under supervision on site. The conditions under which an installer may be considered as suitable trained and the conditions for supervision on site are up to the Member States in which the installation is done.
- Check the position of the existing rebars

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Table A1: Materials

Product form		Bars and de-coiled rods	
Class		B	C
Characteristic yield strength f_{yk} or $f_{0,2k}$ (MPa)		400 to 600	
Minimum value of $k = (f_t / f_y)_k$		$\geq 1,08$	$\geq 1,15$ < 1,35
Characteristic strain at maximum force ϵ_{uk} (%)		$\geq 5,0$	$\geq 7,5$
Bendability		Bend / Rebend test	
Maximum deviation from nominal mass (individual bar) (%)	Nominal bar size (mm)	$\pm 6,0$ $\pm 4,5$	
	≤ 8		
	> 8		
Bond: Minimum relative rib area, $f_{R,min}$	Nominal bar size (mm)	0,040 0,056	
	8 to 12		
	> 12		

Table B1: Minimum concrete cover min c of the bonded-in rebar depending on drilling method

Drilling method	Without drilling
Hammer drilling	30mm + 0,06 $\ell_v \geq 2 d_s$
Compressed air drilling	50 mm + 0,08 ℓ_v

Table B2: Minimum anchorage length¹⁾ and lap lengths for C20/25 and maximum installation length l_{max} for good bond conditions.

Rebar		$\ell_{b,min}$ [mm]	$\ell_{0,min}$ [mm]	ℓ_{max} [mm]
$\varnothing d_s$ [mm]	$f_{y,k}$ [N/mm ²]			
8	500	113	200	400
10	500	142	200	500
12	500	170	200	600
14	500	198	210	700
16	500	227	240	800
20	500	284	300	1000
25	500	354	375	1000
28	500	595	630	1000
32	500	681	720	1000

¹⁾ According to EN 1992-1-1: $\ell_{b,min}$ (8.6) and $\ell_{0,min}$ (8.11) for good bond conditions and $\alpha_6 = 1,0$ with maximum yield stress $\sigma_{sd} = 435$ N/mm² for rebar B500-B and $\gamma_M = 1,15$ and maximum installation length.

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Table B3: Drilling diameter and maximum anchorage depth

Rebar diameter $d_{nom}^{1)}$	Nominal drilling diameter d_{cut}	Max permissible embedment depth ℓ_v
[mm]	[mm]	[mm]
8	12 (10)	400
10	14 (12)	500
12	16	600
14	18	700
16	20	800
20	25	1000
25	32	1000
28	35	1000
32	40	1000

¹⁾The maximum outer rebar diameter over the ribs shall be:
nominal diameter of the bar $d_{nom} + 0,20 d_{nom}$

Table B4: Processing and Load time

Sika AnchorFix®-2+		
Application temperature	Processing time	Load time
+5 to +10°C	10 mins	145 mins
+10 to +15°C	8 mins	85 mins
+15 to +20°C	6 mins	75 mins
+20 to +25°C	5 mins	50 mins
+25 to +30°C	4 mins	40 mins

Processing time refers to the highest temperature in the range. Load time refers to the lowest temperature in the range.
Cartridge must be conditioned to a minimum +5°C.

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Table B6: Brush

Sizes		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø32
Drill hole diameter d ₀	[mm]	12(10)	14(12)	16	18	20	25	32	35	40
Brushes head diameter	[mm]	14	14	19	22	22	29	40	40	42
Brushes head length	[mm]	75								

If required use additional accessories and extension for air nozzle and brush to reach back of hole

Max. hole depth	Brush / extension configuration	Part
250 mm	Standard brush	(a)
550 mm	Brush head unit + handle unit	(b)+(c)
850 mm	Brush head unit + extension piece + handle unit	(b)+(d)+(c)
1150 mm	Brush head unit + 2x extension piece + handle unit	(b)+(d)+(d)+(c)

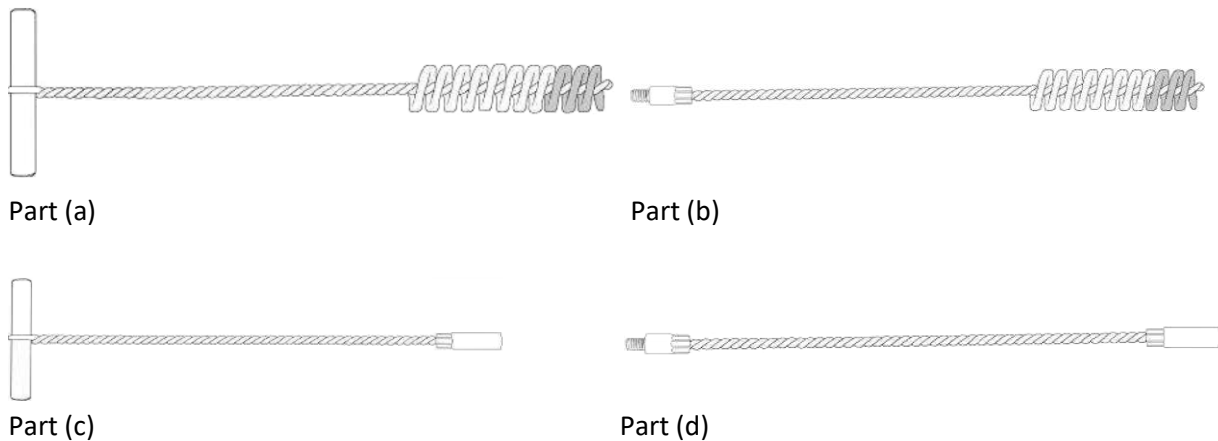


Table B7: Extension hose for deep holes

Sizes		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø32	
Hole diameter	[mm]	10	12	16	18	20	25	32	35	40	
Extension hose	[mm]	9			14						
Resin stopper	[mm]	-	-	-	-	18	22	30	30	36	

Table C1: Design values of the ultimate bond resistance f_{bd}¹⁾ in N/mm² for all drilling methods for good bond conditions

Rebar Ø d _s [mm]	Concrete								
	C12/15	C16/20	C20/25	C25/30	C30/37	C35/45	C40/50	C45/55	C50/60
8 to 16	1,6	2,0	2,3	2,7	3,0	3,4	3,7	4,0	4,3
20								3,7	
25								3,0	
28								2,7	
32								2,3	

¹⁾ Tabulated values f_{bd} are valid for good bond conditions according to EN 1992-1-1. For all other bond conditions multiply the values for f_{bd} by 0,7.

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**8 APPROPRIATE TECHNICAL DOCUMENTATION AND/OR -
SPECIFIC TECHNICAL DOCUMENTATION**

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:

Name: Nikos Anagnostopoulos
Function: TMM Refurbishment
At Athens on 1st of February 2019


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Name: Spyros Hatzifotis
Function: Managing Director
At Athens on 1st of February


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End of information as required by Regulation (EU) No 305/2011

RELATED DECLARATION OF PERFORMANCE

Product Name	Harmonized technical specification	DoP Number
Sika AnchorFix-2+ galvanized or stainless steel bonded ancho	ETA-14/0346	75735322

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FULL CE MARKING



13

Sika Services AG, Zurich, Switzerland

DoP No. 88587701

ETAG 001, Part 1 'Anchors in general', Part 5 'Bonded anchors'

Notified Body 1020

Post installed rebar connections of the sizes 8 to 32 mm with Sika AnchorFix-2 injection mortar.

Reaction to fire - Anchorages satisfy requirements for Class A1

Anchorages subject to: Static and quasi-static load.

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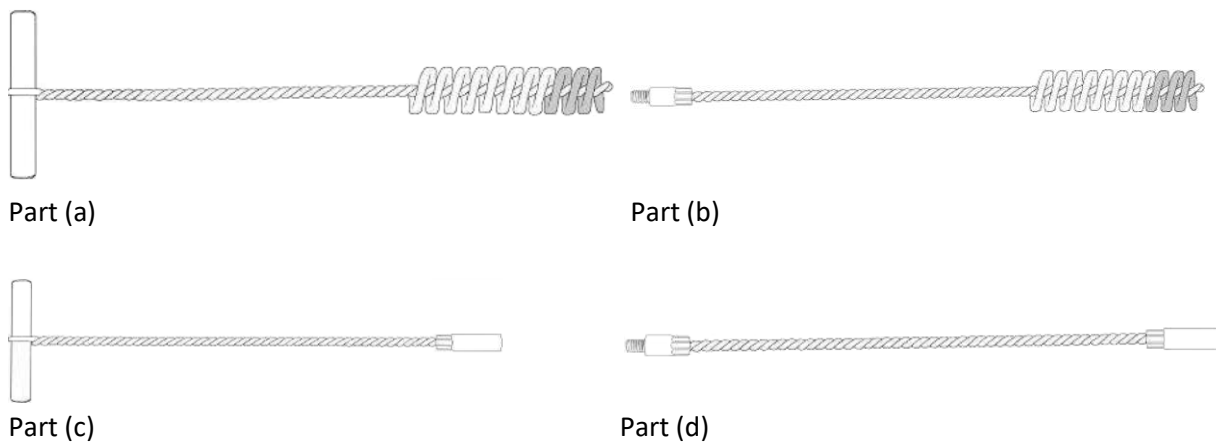


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<http://dop.sika.com>

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CE MARKING TO BE PLACED ON THE LABEL

 13
Sika Services AG, Zurich, Switzerland
DoP No. 88587701
ETAG 001, Part 1 'Anchors in general', Part 5 'Bonded anchors.
Notified Body 1020
Post installed rebar connections of the sizes 8 to 32 mm with Sika AnchorFix-2+ injection mortar.
For details see accompanying documents
http://dop.sika.com

ECOLOGY, HEALTH AND SAFETY INFORMATION (REACH)

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

LEGAL NOTE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sikas recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the products suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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