EKSPLOATACINIŲ SAVYBIŲ DEKLARACIJA

FM-X5

Multi-expansion long plug for Concrete and Masonry

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1. Unikalus produkto tipo identifikacinis kodas:

FM-X5 countersunk head + screw with countersunk head

d_{nom} [4]	L [5] [mm]	t_{fix} [6] [mm]	Marking	Cod. with screw zinc galvanised 5µm	Cod. with screw grey galvanised 10µm	Cod. with screw Stainless steel A4-70
Ø8	80	10	FM-X5 Ø8x80 - 10	64301b08080	64301c08080	64301008080
	100	30	FM-X5 Ø8x80 - 30	64301b08100	64301c08100	64301008100
	120	50	FM-X5 Ø8x80 - 50	64301b08120	64301c08120	64301008120
	150	70	FM-X5 Ø8x80 - 70	64301b08150	64301c08150	64301008150
	170	100	FM-X5 Ø8x80 - 100	64301b08170	64301c08170	64301008170
Ø10	85	15	FM-X5 Ø10x85 - 15	64301b10085	64301c10085	64301010085
	100	30	FM-X5 Ø10x100 - 30	64301b10100	64301c10100	64301010100
	115	45	FM-X5 Ø10x115 - 45	64301b10115	64301c10115	64301010115
	135	55	FM-X5 Ø10x135 - 55	64301b10135	64301c10135	64301010135
	160	90	FM-X5 Ø10x160 - 90	64301b10160	64301c10160	64301010160
	200	130	FM-X5 Ø10x200 - 130	64301b10200	64301c10200	64301010200
	230	160	FM-X5 Ø10x230 - 160	64301b10230	64301c10230	64301010230

FM-X5 countersunk head + screw with hexagonal head

d_{nom} [4]	L [5] [mm]	t_{fix} [6] [mm]	Marking	Cod. with screw zinc galvanised 5µm	Cod. with screw grey galvanised 10µm	Cod. with screw Stainless steel A4-70
Ø10	85	15	FM-X5 Ø10x85 - 15	64302b10085	64302c10085	64302010085
	100	30	FM-X5 Ø10x100 - 30	64302b10100	64302c10100	64302010100
	115	45	FM-X5 Ø10x115 - 45	64302b10115	64302c10115	64302010115
	135	55	FM-X5 Ø10x135 - 55	64302b10135	64302c10135	64302010135
	160	90	FM-X5 Ø10x160 - 90	64302b10160	64302c10160	64302010160

FM-X5 with collar head + screw with hexagonal head

d_{nom} [4]	L [5] [mm]	t_{fix} [6] [mm]	Marking	Cod. with screw zinc galvanised 5µm	Cod. with screw grey galvanised 10µm	Cod. with screw Stainless steel A4-70
Ø10	85	15	FM-X5 Ø10x85 - 15	64402b10085	64402c10085	64402010085
	100	30	FM-X5 Ø10x100 - 30	64402b10100	64402c10100	64402010100
	115	45	FM-X5 Ø10x115 - 45	64402b10115	64402c10115	64402010115
	135	55	FM-X5 Ø10x135 - 55	64402b10135	64402c10135	64402010135
	160	90	FM-X5 Ø10x160 - 90	64402b10160	64402c10160	64402010160

[4] Diameter of anchor sleeve; [5] Length of anchor; [6] Thickness fixture max.

2. Tipo, partijos ar serijos numeris ar bet koks kitas elementas, pagal kurį galima identifikuoti statybos produktą, kaip reikalaujama pagal 11 straipsnio 4 dalį:

Partijos numeris: žr. ant produkto pakuotės

3. Gamintojo numatyta statybos produkto naudojimo paskirtis ar paskirtys pagal taikomą darniąją techninę specifikaciją:

Intended use or uses of the construction product according to ETAG020 parts 1, 2, 3 and 4	
Generic type	Plastic anchor for multiple use in concrete and masonry
Base material (use category)	> A: Normal Weight Concrete acc. to EN 206-1 > B: Solid Masonry acc. to EN 771-1 > C: Hollow or Perforated Masonry acc. to EN 771-1 and EN 771-3 > D: Autoclaved Aerated Concrete acc. to EN 771-4
Material of plug	> Sleeve: Polyamide Pa6 acc. to ISO 1874 > Screw: Steel zinc galvanised 5µm acc. to EN ISO 4042 cl. 5.8-Ø6 and cl.6.8-Ø7 Steel grey galvanised 10µm acc. to EN ISO 4042 cl. 5.8-Ø6 and cl.6.8-Ø7 (1000h NSS acc.to ISO9227) Stainless steel AISI316 A4-70 acc.to ISO 3506-1
Durability (use category)	> Zinc galvanised or grey galvanised steel for dry internal conditions > Stainless Steel AISI316 A4-70 for other environmental conditions

Loading	Multiple use for non-structural applications (static or quasi-static load).
Fire Resistance	F90 for X5 Ø10 in the admissible load [$F_{rk}/(\gamma_M \times \gamma_F)$] is <= 0,8 kN
Fire Reaction	A1 acc. to EN 13501-1 for metal screw (for sleeve part see ETAG020 p.1 sect.5.2.1.)

4. Gamintojo pavadinimas, registruotas komercinis pavadinimas arba registruotas prekės ženklas ir kontaktinis adresas, kaip reikalaujama pagal 11 straipsnio 5 dalį:

FRIULSIDER S.P.A., Via Trieste, 133048 S. Giovanni al Natisone (Udine) Italy

5. Kai taikytina, įgaliotojo atstovo, kuriam suteikti įgaliojimai apima 12 straipsnio 2 dalyje nurodytas užduotis, pavadinimas ir kontaktinis adresas:

Netaikytina

6. Statybos produkto eksploatacinių savybių pastovumo vertinimo ir tikrinimo sistema ar sistemos, kaip nustatyta V priede:

System 2+

7. Eksploatacinių savybių deklaracijos, susijusios su statybos produktu, kuriam taikomas darnusis standartas, atveju:

Netaikytina

8. Eksploatacinių savybių deklaracijos, susijusios su statybos produktu, kuriam buvo išduotas Europos techninis įvertinimas, atveju:

ETA-10/0425 issued by	**ZAG** approval body nr.1404
On the basis of	**ETAG020**
Certificate of Conformity **1404-CPD-1675** issued by	**ZAG** notified body nr.1404
Under System (AVCP)	**2+**

9. Deklaruojamos eksploatacinės savybės:

Žr. PRIEDĄ 3-4 psl.

10. 1 ir 2 punktuose nurodyto produkto eksploatacinės savybės atitinka 9 punkte deklaruojamas eksploatacines savybes. Ši eksploatacinių savybių deklaracija išduota tik 4 punkte nurodyto gamintojo atsakomybe.

Pasirašyta (gamintojas ir jo vardu):

????
(vardas, pavardė ir pareigos)

San Giovanni al Natisone, ????
(išdavimo vieta ir data) (parašas)

PRIEDAI

Declared performances according to ETA-10/0425 (ETAG 020 parts 1, 2, 3 and 4)
Design method ETAG020 Annex C

ESSENTIAL CHARACTERISTICS				**PERFORMANCE**	
Installation parameters				**FM-X5 Ø8**	**FM-X5 Ø10**
d_0	Nominal diameter of drill bit		[mm]	8	10
h_{nom}	Minimum installation depth		[mm]	70	70
h_{min}	Minimum thickness of the concrete member C12/15 - C16/20		[mm]	100	100
s_{min}	Minimum spacing C12/15		[mm]	80	80
c_{min}	Minimum edge distance C12/15		[mm]	80	80
$C_{cr,N}$	Characteristic Edge distance C12/15		[mm]	140	140
s_{min}	Minimum spacing C16/20		[mm]	60	60
c_{min}	Minimum edge distance C16/20		[mm]	60	60
$C_{cr,N}$	Characteristic Edge distance C16/20		[mm]	100	100
h_{min}	Minimum thickness of the masonry member and AAC		[mm]	≥ 106 see under	
s_{min}	Minimum spacing in masonry and AAC - single anchor		[mm]	250	250
c_{min}	Minimum edge distance in masonry and AAC - single anchor		[mm]	100	100
$s1_{min}$	Spacing perpendicular to free edge in masonry and AAC - anchor group		[mm]	200	200
$s2_{min}$	Spacing parallel to free edge in masonry and AAC - anchor group		[mm]	400	400
c_{min}	Minimum edge distance in masonry and AAC - anchor group		[mm]	100	100
Characteristic Bending resistance screw in Concrete, masonry and Autoclaved Aerated Concrete (AAC)					
$M_{Rk,s}$	Characteristic bending resistance	Galvanised Steel	[Nm]	8,6	16,8
$M_{Rk,s}$	Characteristic bending resistance	Stainless Steel A4-70	[Nm]	13,6	24,8
γ_{Ms} [1)]	Partial safety factor	Galvanised Steel	[-]	1,25	
γ_{Ms} [1)]	Partial safety factor	Stainless Steel A4-70	[-]	1,56	
Characteristic Tension Resistance failure of screw for use in Concrete					
$N_{Rk,s}$	Tension Steel characteristic failure	Galvanised Steel	[kN]	11,0	18,1
$N_{Rk,s}$	Tension Steel characteristic failure	Stainless Steel A4-70	[kN]	16,5	25,0
γ_{ms} [1)]	Partial safety factor for tension steel failure	Galvanised Steel	[-]	1,5	
γ_{ms} [1)]	Partial safety factor for tension steel failure	Stainless Steel A4-70	[-]	1,9	
Characteristic Shear Resistance failure of screw for use in Concrete					
$V_{Rk,s}$	Shear Steel characteristic failure	Galvanised Steel	[kN]	5,5	9,0
$V_{Rk,s}$	Shear Steel characteristic failure	Stainless Steel A4-70	[kN]	8,2	12,5
γ_{ms} [1)]	Partial safety factor for shear steel failure	Galvanised Steel	[-]	1,25	
γ_{ms} [1)]	Partial safety factor for shear steel failure	Stainless Steel A4-70	[-]	1,56	
Pull-out failure (plastic sleeve) in Concrete				**FM-X5 Ø8**	**FM-X5 Ø10**
$N_{Rk,p}$	Tension characteristic load in cracked concrete **C12/15**	24°C[2)] / 40° C[3)]	[kN]	**1,5**	**2,5**
$N_{Rk,p}$	Tension characteristic load in cracked concrete C12/15	50°C[2)] / 80° C[3)]	[kN]	**0,75**	**1,5**
$N_{Rk,p}$	Tension characteristic load in cracked concrete **C16/20**	24°C[2)] / 40° C[3)]	[kN]	**2,5**	**3,5**
$N_{Rk,p}$	Tension characteristic load in cracked concrete C16/20	50°C[2)] / 80° C[3)]	[kN]	**1,2**	**2,5**
$\gamma_{m,c}$ [1)]	Partial safety factor		[-]	1,8	
Displacement under Tension and Shear loading in Concrete					
N	Service tension load in concrete **C16/20**		[kN]	**1,0**	**1,4**
δ_{N0}	Short term displacement under tension load		[mm]	3,8	1,7
$\delta_{N\infty}$	Long term displacement under tension load		[mm]	7,5	3,6
V	Service shear load in concrete		[kN]	**1,0**	**1,4**
δ_{V0}	Short term displacement under shear load		[mm]	1,6	0,9
$\delta_{V\infty}$	Long term displacement under tension load		[mm]	2,4	1,35
Characteristic Resistance for single anchor in Solid clay Brick f_b ≥ 43,8 [MPa] ρ ≥ 1,8 [kg/dm³] h_{min} ≥ 120 mm					
F_{Rk}	Characteristic Resistance	24°C[2)] / 40° C[3)]	[kN]	**3,5**	**3,5**
F_{Rk}	Characteristic Resistance	50°C[2)] / 80° C[3)]	[kN]	**2,0**	**2,5**
γ_{Mm} [1)]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Hammer drilling	
Characteristic Resistance for single anchor in Hollow clay Brick - Bimattone f_b ≥ 27,3 [MPa] ρ ≥ 0,9 [kg/dm³] h_{min} ≥ 120 mm					
F_{Rk}	Characteristic Resistance	24°C[2)] / 40° C[3)]	[kN]	**1,5**	**1,5**
F_{Rk}	Characteristic Resistance	50°C[2)] / 80° C[3)]	[kN]	**0,9**	**1,2**
γ_{Mm} [1)]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	

Characteristic Resistance for single anchor in Hollow clay Brick - Alveolater Swiss heavy $f_b \geq 13,8$ [MPa] $\rho \geq 0,9$ [kg/dm³] $h_{min} \geq 250$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**1,5**	**1,5**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,6**	**1,2**
γ_{Mm} [1]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	
Characteristic Resistance for single anchor in Hollow clay Brick - Alveolater Incastro 35 $f_b \geq 10,9$ [MPa] $\rho \geq 0,8$ [kg/dm³] $h_{min} \geq 350$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**1,5**	**1,5**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,75**	**1,2**
γ_{Mm} [1]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	
Characteristic Resistance for single anchor in Hollow clay Brick - Blocco Leggero $f_b \geq 7$ [MPa] $\rho \geq 0,5$ [kg/dm³] $h_{min} \geq 120$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**0,9**	**0,9**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,4**	**0,6**
γ_{Mm} [4]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	
Characteristic Resistance for single anchor in Hollow clay Brick - Poroton $f_b \geq 22$ [MPa] $\rho \geq 0,9$ [kg/dm³] $h_{min} \geq 250$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**1,5**	**2,0**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,9**	**1,2**
γ_{Mm} [1]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	
Characteristic Resistance for single anchor in Hollow clay Brick - Leopard BP category 1HD $f_b \geq 30$ [MPa] $\rho \geq 1,3$ [kg/dm³] $h_{min} \geq 106$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**2,0**	**1,5**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,9**	**0,9**
γ_{Mm} [1]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	
Characteristic Resistance for single anchor in Hollow Brick light weight concrete BC 203 $f_b \geq 4$ [MPa] $\rho \geq 0,95$ [kg/dm³] $h_{min} \geq 200$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**0,75**	**0,6**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,3**	**0,6**
γ_{Mm} [1]	Partial safety factor		[-]	2,5	
	Drill Method		[-]	Rotary drilling	
Characteristic Resistance for single anchor in Autoclaved Aerated Concrete (AAC) $f_b \geq 2,5$ [MPa] $\rho \geq 0,5$ [kg/dm³] $h_{min} \geq 200$ mm					
F_{Rk}	Characteristic Resistance	24°C[2] / 40°C[3]	[kN]	**0,6**	**0,6**
F_{Rk}	Characteristic Resistance	50°C[2] / 80°C[3]	[kN]	**0,6**	**0,5**
γ_{Mm} [1]	Partial safety factor		[-]	2,0	
	Drill Method		[-]	Hammer drilling	

[1] In absence of other national regulations; [2] Maximum long term temperature; [3] Maximum short term temperature.