DECLARATION OF PERFORMANCE
N° MARCOVISFMX5 01A EN

LR ETANCO SAS
Parc les Erables – Bât 1 – 66 route de Sartrouville – BP 49 – 78231 LE PECQ Cedex – France
Tel. : +33 (0)1 34 80 52 00 – Fax : +33 (0)1 30 71 01 89
E-mail : commercial.france@etanco.fr – Web : www.etanco.eu

1. Unique identification code of the product-type :

FM-X5

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

ETA-10/0425
Batch number: see packaging of the product

3. Indented use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Generic type and intended use of the product	**Plastic anchor for multiple use for non-structural applications, diameter Ø8 and Ø10**
For use in	**Cracked an un-cracked Concrete (Minimum C12/15 according to EN 206-1:2003)** **Solid and Hollow masonries**
Option / category	**ETAG 020 category A – B – C – D + TR 020 for FM-X5 Ø10**
Loading	**Multiple use for non-structural applications (static or quasi-static load)**
Material	**Sleeve : Polyamide PA 6 according to ISO 1874** **Screw : Steel class 5.8-Ø6 and class 6.8-Ø7, electro-galvanized ≥ 5 µm according to EN ISO 4042 : Dry internal conditions only** **Screw : Stainless steel ASI316 grade A4-70 according to EN ISO 3506-1: internal dry conditions and external atmospheric exposure (including industrial and marine environment) or exposure in permanently damp internal conditions if no particular aggressive conditions exist.**
Fire class and resistance	**A1 according to EN 13501-1 for metal screw** **F90 for FM-X5 Ø10 in the admissible load [F_{rk} / (γ_M . γ_F)] is ≤ 0,8 kN**

4. Name, registred trade name or registred trade mark and contract address of the manufacturer as required pursuant to Article 11(5):

FRIULSIDER S.p.A.
Via Trieste 1
33048 San Giovanni al Natisone (UD)
Italie

5. Where applicable name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12 (2):

Not relevant

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Not relevant

8. In case of the declaration of performance concerning a construction product for which European Technical Assessment has been issued:

DECLARATION OF PERFORMANCE
N° MARCOVISFMX5 01A EN

Z.A.G. approval body issued ETA-10/0425 on the basis of ETAG 020 and TR 020.
Z.A.G. notified body n°1404 issued according to system 2+ the certificate of conformity n° 1404-CPD-1675.

9. Declared Performances:

Essential characteristics – ETAG 020 categories A – B – C – D				**Performance**	
Installation parameters				**Ø8**	**Ø10**
d_0	Nominal diameter of drill bit		[mm]	8	10
h_{nom}	Minimum installation depth		[mm]	70	70
s_{min}	Minimum spacing (concrete C12/15)		[mm]	80	80
c_{min}	Minimum edge distance (concrete C12/15)		[mm]	80	80
$c_{cr,N}$	Characteristic edge distance (concrete C12/15)		[mm]	140	140
h_{min}	Minimum thickness (concrete C12/15)		[mm]	100	100
s_{min}	Minimum spacing (concrete C16/20)		[mm]	60	60
c_{min}	Minimum edge distance (concrete C16/20)		[mm]	60	60
$c_{cr,N}$	Characteristic edge distance (concrete C16/20)		[mm]	100	100
h_{min}	Minimum thickness (concrete C16/20)		[mm]	100	100
s_{min}	Minimum spacing for single anchor (masonry)		[mm]	250	250
s_{1min}	Spacing perpendicular to free edge for anchor group (masonry)		[mm]	200	200
s_{2min}	Spacing parallel to free edge for anchor group (masonry)		[mm]	400	400
c_{min}	Minimum edge distance (masonry)		[mm]	100	100
h_{min}	Minimum thickness (masonry)		[mm]	≥ 106 – see under	
Characteristic bending resistance screw in concrete, masonry and autoclaved aerated concrete (AAC)					
$M_{Rk,s}$	Characteristic bending resistance (galvanized steel)		[kN]	8,6	16,8
$M_{Rk,s}$	Characteristic bending resistance (stainless steel)		[kN]	13,6	24,8
γ_M [1)]	Partial safety factor (galvanized steel)		[-]	1,25	
γ_M [1)]	Partial safety factor (stainless steel)		[-]	1,56	
Characteristic tension resistance failure of screw for use in concrete					
$N_{Rk,s}$	Tension steel characteristic failure (galvanized steel)		[kN]	11,0	18,1
$N_{Rk,s}$	Tension steel characteristic failure (stainless steel)		[kN]	16,5	25,0
γ_{ms} [1)]	Partial safety factor (galvanized steel)		[-]	1,5	
γ_{ms} [1)]	Partial safety factor (stainless steel)		[-]	1,9	
Characteristic shear resistance failure of screw for use in concrete					
$V_{Rk,s}$	Shear steel characteristic failure (galvanized steel)		[kN]	5,5	9,0
$V_{Rk,s}$	Shear steel characteristic failure (stainless steel)		[kN]	8,2	12,5
γ_{ms} [1)]	Partial safety factor (galvanized steel)		[-]	1,25	
γ_{ms} [1)]	Partial safety factor (stainless steel)		[-]	1,56	
Pull-out failure (plastic sleeve) in concrete					
$N_{Rk,p}$	Tension characteristic load (concrete C12/15)	24°C[2)] / 40°C[3)]	[kN]	**1,5**	**2,5**
$N_{Rk,p}$	Tension characteristic load (concrete C12/15)	50°C[2)] / 80°C[3)]	[kN]	**0,75**	**1,5**
$N_{Rk,p}$	Tension characteristic load (concrete C16/20)	24°C[2)] / 40°C[3)]	[kN]	**2,5**	**3,5**
$N_{Rk,p}$	Tension characteristic load (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 (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 (concrete C16/20)		[kN]	**1,0**	**1,4**

Suite ↴

DECLARATION OF PERFORMANCE
N° MARCOVISFMX5 01A EN

Suite ↴

δ_{N0}	Short term displacement under shear load		[mm]	1,6	0,9
$\delta_{N\infty}$	Long term displacement under shear load		[mm]	2,4	1,35
Characteristic resistance in solid clay brick – $f_b \geq 43,8$ MPa – $\rho \geq 1,8$ kg/dm^3 – $h_{min} \geq 120$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**3,5**	**3,5**
F_{Rk}	Characteristic resistance for single anchor	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 in hollow clay brick – Bimattone – $f_b \geq 27,3$ MPa – $\rho \geq 0,9$ kg/dm^3 – $h_{min} \geq 120$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**1,5**	**1,5**
F_{Rk}	Characteristic resistance for single anchor	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 in hollow clay brick – Alveolater svizzero pesante – $f_b \geq 13,8$ MPa – $\rho \geq 0,9$ kg/dm^3 – $h_{min} \geq 250$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**1,5**	**1,5**
F_{Rk}	Characteristic resistance for single anchor	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 in hollow clay brick – Alveolater incastro 35 – $f_b \geq 10,9$ MPa – $\rho \geq 0,8$ kg/dm^3 – $h_{min} \geq 350$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**1,5**	**1,5**
F_{Rk}	Characteristic resistance for single anchor	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 in hollow clay brick – Blocco leggero – $f_b \geq 7$ MPa – $\rho \geq 0,5$ kg/dm^3 – $h_{min} \geq 120$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**0,9**	**0,9**
F_{Rk}	Characteristic resistance for single anchor	50°C[2] / 80°C[3]	[kN]	**0,4**	**0,6**
γ_{Mm} [1]	Partial safety factor			2,5	
	Drill method			Rotary drilling	
Characteristic resistance in hollow clay brick – Poroton – $f_b \geq 22$ MPa – $\rho \geq 0,9$ kg/dm^3 – $h_{min} \geq 250$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**1,5**	**2,0**
F_{Rk}	Characteristic resistance for single anchor	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 in hollow clay brick – Leopard BP cat. 1HD – $f_b \geq 30$ MPa – $\rho \geq 1,3$ kg/dm^3 – $h_{min} \geq 106$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**2,0**	**1,5**
F_{Rk}	Characteristic resistance for single anchor	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 in hollow brick light weight concrete – BC 203 n° 26 – $f_b \geq 4$ MPa – $\rho \geq 0,95$ kg/dm^3 – $h_{min} \geq 200$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**0,75**	**0,6**
F_{Rk}	Characteristic resistance for single anchor	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 in autoclaved aerated concrete – AAC – $f_b \geq 2,5$ MPa – $\rho \geq 0,5$ kg/dm^3 – $h_{min} \geq 200$ mm					
F_{Rk}	Characteristic resistance for single anchor	24°C[2] / 40°C[3]	[kN]	**0,6**	**0,6**
F_{Rk}	Characteristic resistance for single anchor	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.

DECLARATION OF PERFORMANCE
N° MARCOVISFMX5 01A EN

We inform you that Friulsider is classified in the EC 1907/2006 Reach Directive as a Downstream-user of substances.
The product supplied does not contain substances classified as SVHC according to the Candidate List in a concentration equal or greater than 0.1% (weight / weight). Article 31 is not applicable to the present product.

10. The performance of the product identified in points 1 and 2 is in conformity with declared performance in the point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and behalf of the manufacturer by:

Benoit Cheramy Product Manager	Le Pecq – France, 2013-06-21	