

	<b>DECLARATION OF PERFORMANCE</b> In accordance with Construction Products Regulation n° 305/2011
	DoP No. 11/0396



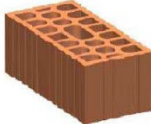
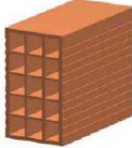



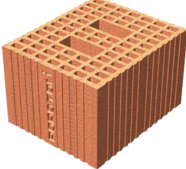


<b>1. Unique identification code of the product-type:</b> BCR POLY SF
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<b>2. Type, batch, series number or any other element allowing identification of the construction product in accordance with Article 11(4):</b> BCR + content in ml+ POLY SF. Example: BCR 400 POLY SF
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<b>3. Intended use or uses of the construction product, in accordance with the relevant harmonized technical specification, as intended by the manufacturer:</b>
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<b>Intended use</b>	Chemical anchor for anchoring threaded rods and rods with improved adhesion.				
<b>Measures</b>	M8 - $\phi$ 8	M10-10 $\phi$	M12-12 $\phi$	M16	
<b>B category</b>	80	85	95	105	
<b>hef [mm]</b>	<b>Category c</b> 80 with GC 12x80	85 with GC 15x85	135 with GC 15x135	85 with GC 20x85	-
<b>Category d</b>	80	85	95	105	
	GC = perforated plastic Sleeve for use in hollow or perforated bricks				
<b>Support type and resistance</b>	Solid brick masonry (use category b) Hollow or perforated brick masonry (use category c) AAC autoclaved aerated concrete blocks (use category d) The resistance class of the masonry mortar must be at least M 2.5 in accordance with EN 998-2:2010.				
<b>Metallic material of the anchor and related environmental exposure condition</b>	Threaded rods: X1) structures subject to dry internal conditions: elements made of galvanized steel (galvanized or hot galvanized) and stainless steel A2, A4 or high corrosion resistance steel (HCR). X2) structures subject to external atmospheric exposure (including industrial and marine environment) and permanently humid internal conditions, if there are no particular aggressive conditions: elements made of a4 stainless steel or high resistance steel (HCR). X3) Structures subject to external atmospheric exposure (including industrial and marine environments) and permanently humid internal conditions, if other particular aggressive conditions exist. Such particularly aggressive conditions are e.g. permanent, alternating immersion in sea water or in the sea water spray zone, chloride atmosphere of swimming pools or indoor environments with chemical pollution (e.g. in desulphurisation plants or road tunnels where anti-icing materials are used): Elements made of corrosion resistant steel (HCR)  Bars with improved adhesion class B or C in accordance with EN 1992-1-1				
<b>Type of load</b>	Static and quasi-static load.				
<b>Service temperatures</b>	a) from -40°C to +40°C (max. short-term temperature +40°C and max. long-term continuous temperature +24°C). b) from -40°C to +50°C (max. short-term temperature +50°C and max. long-term continuous temperature +40°C).				
<b>Usage category</b>	Category w/d and w/w: installation in wet substrate and use in structures subject to dry and wet conditions. Drilling with drill.				

**ANNEX: Type and resistance of support**

Brick n°	Brick name – Use category Density [kg/dm <sup>3</sup> ] Dimensions L x B x H [mm]	Brick image
1	Solid brick (b) EN 771-1 Full Brick $\rho=1700$ 120 x 240 x 60	
2	Solid brick (b) EN 771-1 Classic red $\rho=1560$ 120 x 250 x 55	
3	Perforated brick (c) EN 771-1 UNI Double Brick $\rho=810$ 240 x 120 x 120	
4	Perforated brick (c) EN 771-1 Perforated brick $\rho=550$ 250 x 250 x 120	
5	Perforated brick (c) EN 771-1 Brique creuse RC 40 $\rho=600$ 555 x 195 x 275	
6	Perforated brick (c) EN 771-1 Porotherm 25 P+W $\rho=800$ 373 x 238 x 250	
7	Hollow brick (c) EN 771-1 Hz B – 1.0 1NF 12-1 $\rho=900$ 115 x 240 x 71	
8	Hollow brick (c) EN 771-1 Poroton $\rho=900$ 300 x 245 x 230	
9	AAC2 (d) EN 771-4 Climagold $\rho=300$ 625 x 200 x 360	
10	AAC5 (d) EN 771-4 Seismic block $\rho=575$ 625 x 200 x 300	

**4. Name, registered trade name or registered trade mark and address of the manufacturer in accordance with Article 11(5):**  
 Bossong SpA - via Enrico Fermi 49/51 - 24050 Grassobbio ( Bg ) – Italy – [www.bossong.com](http://www.bossong.com)

**5. Where appropriate, name and address of the authorized representative whose mandate covers the tasks referred to in Article 12(2):**  
 Not applicable

**6. System or systems for evaluating and verifying the constancy of performance of the construction product referred to in Annex V:**  
 System 1

**7. In the case of a declaration of performance relating to a construction product that falls within the scope of a harmonized standard:**  
 Not applicable

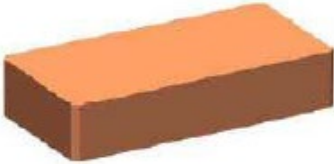
**8. In the case of a declaration of performance relating to a construction product for which a European technical assessment has been issued:**  
 ETA- Denmark A/S issued ETA-11/0396 based on EAD 330076-01-0604.  
 TZUS (No. 1020) performed:  
 determination of the product-type based on type tests (including sampling), type calculations, values taken from tables or descriptive documentation of the product; initial inspection of the manufacturing plant and factory production control; continuous surveillance, evaluation and verification of factory production control, with attestation system 1 and has issued the certificate of conformity n° 1020-CPR-090-043643.

**9. Declared performance:**

HARMONIZED TECHNICAL SPECIFICATION: EAD330076-01-0604				
ESSENTIAL FEATURES	PERFORMANCE IN ACCORDANCE WITH ETA-11/0396			
Installation parameters	M8	M10	M12	M16
d [mm]	8	10	12	16
d <sub>0</sub> [mm] bed category (solid masonry - AAC)	10	12	14	18
d <sub>0</sub> [mm] category c (hollow or perforated masonry)	12	16	20	-
Type of plastic Sleeve for use in category C	GC 12x80	GC 15x85 GC 15x135	GC 20x85	-
d <sub>fix</sub> [mm]	9	12	14	18
h <sub>1</sub> [mm]	h <sub>and f</sub> + 5 mm			
T <sub>inst</sub> [Nm] category b (solid masonry)	5	8	10	10
T <sub>inst</sub> [Nm] category c (hollow or perforated masonry)	3	4	6	-
T <sub>inst</sub> [Nm] category d (AAC brick)	2	2	2	2

Brick	Installation and use conditions	Diameter	B factor
Brick n°1	d/d - w/d - w/w	M8-M10-M12	0,85
Brick n°2	d/d - w/d - w/w	M8 to M16 and $\phi$ 8 to $\phi$ 12	0,85
Brick n°3-4-5-6-7	d/d - w/d - w/w	M8+GC 12x80 M10+GC 15x85 M12+GC 20x85	0,85
Brick n°8	d/d - w/d - w/w	M10+GC 15x135	0,85
Brick n° 9-10	d/d - w/d - w/w	M8 to M16	0,89

### Solid Brick

Brick type	Solid Brick	
Compressive strength [N/mm <sup>2</sup> ]	≥ 73	
Brick dimensions [mm]	≥ 240 x 120 x 60	
Drilling method	Rotary percussion drilling	

### Installation parameters

Diameter	Anchorage depth [mm]	Distance from edge [mm]	Spacing [mm]
		$C_{min} = C_{cr}$	$S_{min} = S_{cr, \perp} = S_{cr, \parallel}$
M8	80	120	240
M10	85	128	255
M12	95	143	285

### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
		$N_{Rk}$ [kN]	$V_{Rk,b}$ [kN]
M8	80	1.50	4.50
M10	85	3.00	9.00
M12	95	3.00	9.00

1) For planning according to TR 054:  $N_{Rk} = N_{Rk,p} = N_{Rk,b}$ ;  $N_{Rk,s}$  according to Table C2 Annex C2; Calculation  $N_{Rk,pb}$  see TR 054

2) For  $V_{Rk}$ , see Annex C2, Table C2; Calculation of  $V_{Rk,pb}$  and  $V_{Rk,c}$  see TR 054


### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		$F$ [kN]	$\delta_{N0}$ [mm]	$\delta_{N\infty}$ [mm]	$F$ [kN]	$\delta_{V0}$ [mm]	$\delta V_{\infty}$ [mm]
M8	80	0.65	0.08	0.16	1.32	0.23	0.34
M10	85	1.03	0.07	0.16	2.94	0.48	0.72
M12	95	1.15	0.06	0.16	2.62	0.38	0.57

### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	$\alpha_{g \parallel, N}$	$\alpha_{g \perp, N}$	$\alpha_{g \parallel, V \parallel}$	$\alpha_{g \perp, V \parallel}$	$\alpha_{g \parallel, V \perp}$	$\alpha_{g \perp, V \perp}$
$S \geq S_{min}$ and $C \geq C_{min}$	2.0	2.0	2.0	2.0	2.0	2.0

### Classic Red Brick

Brick type	Classic Red Brick	
Compressive strength [N/mm <sup>2</sup> ]	≥ 21	
Brick dimensions [mm]	≥ 250 x 120 x 55	
Drilling method	Rotary percussion drilling	

### Installation parameters

Diameter	Anchorage depth [mm]	Distance from edge [mm]		Spacing [mm]	
		C <sub>min</sub>	C <sub>cr</sub>	S <sub>min</sub>	S <sub>cr, ⊥</sub> = S <sub>cr,   </sub>
M8	80	50	120	50	240
M10	85	50	128	50	255
M12	95	50	143	50	285
M16	105	60	158	60	315

### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C e -40°C/+40°C/+50°C			
		N <sub>Rk</sub> [kN]		V <sub>Rk,b</sub> [kN]	
		C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>	C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>
M8	80	2.00	2.00	4.50	5.50
M10	85	2.50	2.50	8.00	8.50
M12	95	3.00	3.50	11.00	11.50
M16	105	3.50	4.00	13.00	13.50

- 1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054  
 2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054


### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]		δ <sub>N0</sub> [mm]		δ <sub>N∞</sub> [mm]	
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δ <sub>V∞</sub> [mm]
M8	80	0.71	0.08	0.16	1.62	0.27	0.41
M10	85	0.97	0.10	0.20	2.50	0.30	0.45
M12	95	1.31	0.11	0.22	3.42	0.34	0.51
M16	105	1.48	0.13	0.26	3.87	0.35	0.53

### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Classic Red Brick

Brick type	Classic Red Brick	
Compressive strength [N/mm <sup>2</sup> ]	≥ 21	
Brick dimensions [mm]	≥ 250 x 120 x 55	
Drilling method	Rotary percussion drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Distance from edge [mm]		Spacing [mm]	
		C <sub>min</sub>	C <sub>cr</sub>	S <sub>min</sub>	S <sub>cr, ⊥</sub> = S <sub>cr,   </sub>
φ8	80	50	120	50	240
φ10	85	50	128	50	255
φ12	95	50	143	50	285

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C			
		N <sub>Rk</sub> [kN]		V <sub>Rk,b</sub> [kN]	
		C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>	C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>
φ8	80	2,00	2,00	4,50	5,50
φ10	85	3,00	3,00	8,00	8,00
φ12	95	3,00	3,50	11,00	11,50

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054

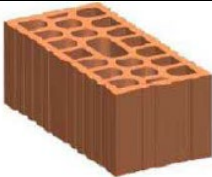
#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]		δ <sub>N0</sub> [mm]		δ <sub>N∞</sub> [mm]	
		F	δ <sub>N0</sub>	F	δ <sub>N∞</sub>	F	δ <sub>N∞</sub>
φ8	80	0.81	0.12	0.24	1.63	0.29	0.44
φ10	85	1.08	0.13	0.26	2.31	0.34	0.51
φ12	95	1.21	0.15	0.30	3.33	0.38	0.57

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V L</sub>	α <sub>g ⊥, V L</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### DOPPIO UNI brick

Brick type	DOPPIO UNI brick	
Compressive strength [N/mm <sup>2</sup> ]	≥ 18.3	
Brick dimensions [mm]	≥ 240 x 120 x 120	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Distance from edge [mm]		Spacing [mm]	
			C <sub>min</sub>	C <sub>or</sub>	S <sub>min,II</sub> = S <sub>cr,II</sub>	S <sub>min,⊥</sub> = S <sub>cr,⊥</sub>
M8	80	12x80	120	120	240	120
M10	85	15x85	120	120	240	120
M12	85	20x85	120	120	240	120

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
			N <sub>Rk</sub> [kN]	V <sub>Rk,b</sub> [kN]
M8	80	12x80	4.00	6.00
M10	85	15x85	5.00	6.50
M12	85	20x85	5.50	9.00

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054


#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δV <sub>∞</sub> [mm]
M8	80	1.48	0.06	0.16	1.72	0.20	0.30
M10	85	1.81	0.08	0.16	2.03	0.38	0.57
M12	85	2.09	0.10	0.20	2.93	0.34	0.51

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Perforated brick

Brick type	Perforated brick	
Compressive strength [N/mm <sup>2</sup> ]	≥ 5.3	
Brick dimensions [mm]	≥ 250 x 120 x 250	
Drilling method	Rotary drilling	

### Installation parameters

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Distance from edge [mm]		Spacing [mm]	
			C <sub>min</sub>	C <sub>cr</sub>	S <sub>min,II</sub> = S <sub>cr,II</sub>	S <sub>min,⊥</sub> = S <sub>cr,⊥</sub>
M8	80	12x80	125	125	250	250
M10	85	15x85	125	125	250	250
M12	85	20x85	125	125	250	250

### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
			N <sub>Rk</sub> [kN]	V <sub>Rk,b</sub> [kN]
M8	80	12x80	0.75	3.00
M10	85	15x85	2.00	3.00
M12	85	20x85	2.00	3.00

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054

### Displacement


Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δ <sub>v∞</sub> [mm]
M8	80	0.29	0.06	0.16	0.93	0.31	0.46
M10	85	0.73	0.08	0.16	1.08	0.23	0.34
M12	85	0.80	0.07	0.16	0.86	0.18	0.27

### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0



### Brique brick creuse RC 40

Brick type	Brique creuse RC 40	
Compressive strength [N/mm <sup>2</sup> ]	≥ 4.0	
Brick dimensions [mm]	≥ 555 x 195 x 275	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Distance from edge [mm]		Spacing [mm]	
			C <sub>min</sub>	C <sub>cr</sub>	S <sub>min,II</sub> = S <sub>cr,II</sub>	S <sub>min,I</sub> = S <sub>cr,I</sub>
M8	80	12x80	278	278	555	275
M10	85	15x85	278	278	555	275
M12	85	20x85	278	278	555	275

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
			N <sub>Rk</sub> [kN]	V <sub>Rk,b</sub> [kN]
M8	80	12x80	1,00	1,50
M10	85	15x85	1,00	1,50
M12	85	20x85	0,75	1,50

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054


#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δ <sub>v∞</sub> [mm]
M8	80	0.39	0.06	0.16	0.44	0.10	0.15
M10	85	0.44	0.06	0.16	0.63	0.18	0.27
M12	85	0.26	0.06	0.16	0.44	0.27	0.40

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g I, N</sub>	α <sub>g II, V II</sub>	α <sub>g I, V II</sub>	α <sub>g II, V I</sub>	α <sub>g I, V I</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Porotherm 25 P+W brick

Brick type	Porotherm 25 P+W	
Compressive strength [N/mm <sup>2</sup> ]	≥ 15.0	
Brick dimensions [mm]	≥ 373 x 238 x 250	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Distance from edge [mm]		Spacing [mm]	
			C <sub>min</sub>	C <sub>cr</sub>	S <sub>min,II</sub> = S <sub>cr,II</sub>	S <sub>min,⊥</sub> = S <sub>cr,⊥</sub>
M8	80	12x80	187	187	373	250
M10	85	15x85	187	187	373	250
M12	85	20x85	187	187	373	250

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
			N <sub>Rk</sub> [kN]	V <sub>Rk,b</sub> [kN]
M8	80	12x80	2.50	2.50
M10	85	15x85	2.50	3.50
M12	85	20x85	3.00	3.50

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054


#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δ <sub>v∞</sub> [mm]
M8	80	0.92	0.06	0.16	0.78	0.23	0.34
M10	85	0.91	0.06	0.16	1.06	0.19	0.28
M12	85	1.02	0.06	0.16	1.00	0.31	0.46

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Brick Hz B – 1.0 1NF 12-1

Brick type	Hz B – 1.0 1NF 12-1	
Compressive strength [N/mm <sup>2</sup> ]	≥ 15.0	
Brick dimensions [mm]	≥ 115 x 240 x 71	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Distance from edge [mm]		Spacing [mm]	
			C <sub>min</sub>	C <sub>cr</sub>	S <sub>min,II</sub> = S <sub>cr,II</sub>	S <sub>min,I</sub> = S <sub>cr,I</sub>
M8	80	12x80	120	120	240	120
M10	85	15x85	120	120	240	120
M12	85	20x85	120	120	240	120

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
			N <sub>Rk</sub> [kN]	V <sub>Rk,b</sub> [kN]
M8	80	12x80	3.50	4.00
M10	85	15x85	4.50	5.50
M12	85	20x85	5.00	5.50

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054

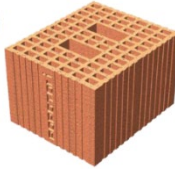
#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δ <sub>v∞</sub> [mm]
M8	80	1.19	0.12	0.24	1.25	0.17	0.25
M10	85	1.69	0.07	0.16	2.23	0.69	1.03
M12	85	1.78	0.06	0.16	1.65	0.13	0.19

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g,II,N</sub>	α <sub>g,I,N</sub>	α <sub>g,II,VII</sub>	α <sub>g,I,VII</sub>	α <sub>g,II,V⊥</sub>	α <sub>g,I,V⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Poroton P800 brick

Brick type	Poroton P800	
Compressive strength [N/mm <sup>2</sup> ]	≥ 15.0	
Brick dimensions [mm]	≥ 300 x 245 x 230	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Distance from edge [mm]		Spacing [mm]	
			C <sub>min</sub>	C <sub>cr</sub>	S <sub>min,II</sub> = S <sub>cr,II</sub>	S <sub>min,⊥</sub> = S <sub>cr,⊥</sub>
M10	135	15x135	100	100	300	230

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Sleeve dxL [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C	
			N <sub>Rk</sub> [kN]	V <sub>Rk,b</sub> [kN]
M10	135	15x135	3.50	5.50

1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054

2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054


#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>V0</sub> [mm]	δV <sub>∞</sub> [mm]
M10	135	1.22	0.11	0.22	1.61	0.24	0.36

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Climagold brick AAC2

Brick type	Climagold	
Compressive strength [N/mm <sup>2</sup> ]	≥ 1.8	
Brick dimensions [mm]	≥ 625 x 200 x 360	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Distance from edge [mm]		Spacing [mm]	
		C <sub>min</sub>	C <sub>cr</sub>	S <sub>min</sub>	S <sub>cr, ⊥</sub> = S <sub>cr,   </sub>
M8	80	50	120	50	240
M10	85	50	128	50	255
M12	95	50	143	50	285
M16	105	60	158	60	315

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C e -40°C/+40°C/+50°C			
		N <sub>Rk</sub> [kN]		V <sub>Rk,b</sub> [kN]	
		C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>	C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>
M8	80	1.00	1.50	1.00	1.50
M10	85	1.50	2.00	1.50	1.50
M12	95	2.00	2.50	2.50	2.50
M16	105	2.00	2.50	2.50	2.50

- 1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054  
 2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054


#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		Tensile			Shear		
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>V0</sub> [mm]	δ <sub>V∞</sub> [mm]
M8	80	0.63	0.10	0.20	0.65	0.31	0.47
M10	85	0.83	0.12	0.24	0.69	0.34	0.51
M12	95	1.01	0.15	0.30	0.90	0.38	0.57
M16	105	0.99	0.16	0.32	0.98	0.40	0.60

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

### Brick Seismic block AAC5

Brick type	Seismic block	
Compressive strength [N/mm <sup>2</sup> ]	≥ 5.0	
Brick dimensions [mm]	≥ 625 x 200 x 300	
Drilling method	Rotary drilling	

#### Installation parameters

Diameter	Anchorage depth [mm]	Distance from edge [mm]		Spacing [mm]	
		C <sub>min</sub>	C <sub>cr</sub>	S <sub>min</sub>	S <sub>cr, ⊥</sub> = S <sub>cr,   </sub>
M8	80	50	120	50	240
M10	85	50	128	50	255
M12	95	50	143	50	285
M16	105	60	158	60	315

#### Characteristic values of resistance to tensile and shear loads

Diameter	Anchorage depth [mm]	Categories d/d, w/d and w/w Temperature range -40°C/+24°C/+40°C and -40°C/+40°C/+50°C			
		N <sub>Rk</sub> [kN]		V <sub>Rk,b</sub> [kN]	
		C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>	C = C <sub>min</sub> - S = S <sub>min</sub>	C = C <sub>cr</sub> - S = S <sub>cr</sub>
M8	80	1,00	2,50	1,00	3,50
M10	85	1,50	3,00	1,50	4,00
M12	95	2,00	3,50	2,50	4,00
M16	105	2,00	4,00	2,50	4,00

- 1) For planning according to TR 054: N<sub>Rk</sub> = N<sub>Rk,p</sub> = N<sub>Rk,b</sub>; N<sub>Rk,s</sub> according to Table C2 Annex C2; Calculation N<sub>Rk,pb</sub> see TR 054  
 2) For V<sub>Rk</sub>, see Annex C2, Table C2; Calculation of V<sub>Rk,pb</sub> and V<sub>Rk,c</sub> see TR 054

#### Displacement

Diameter	Anchorage depth [mm]	Displacement under service load Tensile and shear load					
		F [kN]		δ <sub>N0</sub> [mm]		δ <sub>N∞</sub> [mm]	
		F [kN]	δ <sub>N0</sub> [mm]	δ <sub>N∞</sub> [mm]	F [kN]	δ <sub>v0</sub> [mm]	δ <sub>v∞</sub> [mm]
M8	80	1.10	0.08	0.16	1.29	0.31	0.47
M10	85	1.22	0.10	0.20	1.53	0.32	0.48
M12	95	1.52	0.11	0.22	1.55	0.43	0.65
M16	105	1.74	0.11	0.22	1.58	0.45	0.68

#### Group factor

Configuration	Tensile		Shear parallel to the free edge		Shear perpendicular to the free edge	
	α <sub>g II, N</sub>	α <sub>g ⊥, N</sub>	α <sub>g II, V II</sub>	α <sub>g ⊥, V II</sub>	α <sub>g II, V ⊥</sub>	α <sub>g ⊥, V ⊥</sub>
S ≥ S <sub>min</sub> and C ≥ C <sub>min</sub>	2.0	2.0	2.0	2.0	2.0	2.0

HARMONIZED TECHNICAL SPECIFICATION: EAD330076-01-0604	
ESSENTIAL FEATURES	PERFORMANCE
Reaction to fire	In the final application the layer thicknesses of product are approximately 1 ÷ 2 mm and most of these products are classified in class A1 according to the decision THERE IS 96/603/EC . Therefore one can assume that the material binder (resin synthetic or a mixture of synthetic resin and cementitious ) in connection with the metal anchor, in use final application, Not makes any contribution to the development of fire or to a fire fully developed and it hasn't no influence on the risk of smoke development .

HARMONIZED TECHNICAL SPECIFICATION: EAD330076-01-0604	
ESSENTIAL FEATURES	PERFORMANCE
Fire resistant	NPD

LEGEND OF SYMBOLS	
d	Diameter of the bolt or threaded part
d <sub>0</sub>	Hole diameter
d <sub>fix</sub>	Diameter of the hole in the object to be fixed
h <sub>ef</sub>	Effective anchoring depth
h <sub>1</sub>	Hole depth
T <sub>inst</sub>	Tightening torque
S <sub>min</sub>	Minimum wheelbase
C <sub>min</sub>	Minimum distance from the edges
N <sub>Rk</sub>	Characteristic tensile strength for single anchorage
V <sub>Rk</sub>	Characteristic shear resistance for each anchor
γ <sub>Mm</sub>	Partial safety coefficient
S <sub>cr,N</sub>	Spacing to ensure the transmission of the characteristic load for a single anchorage
C <sub>cr,N</sub>	Distance from the edge to ensure the transmission of the characteristic load for a single anchorage
β	Factor according to EAD330076-01-0604
α	Group factor
F	Service load
δ <sub>0</sub>	Short-term displacement under service load
δ <sub>∞</sub>	Long-term travel under service load
NPD	Performance not declared

### REACH Regulation n°1907/2006

Esteemed customer,

We inform you that our company within the REACH regulation supply chain is classified as a downstream user of substances and preparations.

Regarding the product defined in point 1, we want to confirm that it does not currently contain substances considered SVHC based on the list published at:

[http://echa.europa.eu/chem\\_data/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/candidate_list_table_en.asp).

The product safety data sheet can be requested from our technical office: [tek@bossong.com](mailto:tek@bossong.com) or downloaded from our website [www.bossong.com](http://www.bossong.com).

**10. The performance of the product referred to in points 1 and 2 is in conformity with the declared performance referred to in point 9.**

**This declaration of performance is issued under the exclusive responsibility of the manufacturer referred to in point 4.**

**Signed for and on behalf of:**

Name and function	Place and date of release	Signature
Andrea Taddei Director General	Grassobbio ( Bg ) - Italy 03.29.2024	