Hollow masonry

Solid masonry

Injection resin CHIMFORT KEM P

For embedment in solid and hollow masonry

ETANCO

TECHNICAL DATA SHEET

FT n° 5007 - 17/12/2018

CHIMFORT KEM P, polyester injection resin for anchoring into solid and hollow stonework.

The resin

Cartridges available

	ml	Pack	Colour	No. of nozzles(s) per cartridge	Box	Code
Chimfort KEM P 380	380	1	Grey	2	10	344 611 000
Chimfort KEM P 280	280	1	Grey	2	12	344 610 000

Certifications

	CHIMFORT KEM P	
Concrete Option 7	ETA-12/0608	M8 ... M24
Masonry ETAG 029	ETA-12/0534	M8 ... M16
Flooded hole	ETA-12/0608	M8 ... M24
Styrene-free	yes	
Extreme operating temperature	-40°C +80°C (long period +50°C)	
Min/max application temperature	-5/+40°C	

Temperature range

Temperature range	Temperature of substrate material	Max. long-term temperature in the substrate material	Max. short-term temperature in the substrate material
Temperature range Ta	-40°C to +40°C	24°C	80°C
Temperature range Tb	-40°C to +80°C	50°C	80°C

Maximum working time and minimum load time

Temperature of substrate material	Polymerisation time	Load time on dry concrete	Load time on wet concrete
-5°C to -1°C	90 min	6 hours	12 hours
0°C to +4°C	45 min	3 hours	6 hours
+5°C to +9°C	25 min	2 hours	4 hours
+10°C to +14°C	20 min	100 min	200 min
+15°C to +19°C	15 min	80 min	160 min
+20°C to +29°C	6 min	45 min	90 min
+30°C to +34°C	4 min	25 min	50 min
+35°C to +39°C	2 min	20 min	40 min
Cartridge storage temperature	+5°C to +40°C		

Threaded rods

Ranges, materials and coatings

Description	Material
Galvanized threaded rod	Galvanized steel grade 5.8>= 5µm
Stainless steel rod	Stainless steel A4-70
Sleeve	Galvanized steel grade 6.8>= 5µm

Installation data

Screen

		Nominal diameter of bit	Minimum depth of installation
D	L	d_0	H_{nom}
12	80	12	80
16	85	16	85
16	130	16	130
20	85	20	85
20	130	20	130
20	200	20	200

Sleeve

Diameter of external part	Diameter of internal part	Length of part	Nominal diameter of bit	Minimum depth of installation
D ext	D int	L	d_0	H_{nom}
12	8	80	16	80
14	10	80	20	85
16	12	80	20	130

Possible installations defined according to the 3 threaded rod and threaded sleeve ranges:

- Rod and screen for hollow bricks of all sizes and hollow cinder blocks with a thickness of ≤ 150 mm
- Rod and screen for hollow bricks of all sizes and hollow cinder blocks with a thickness of ≥ 200 mm
- Threaded sleeve for hollow bricks and cinder blocks of all sizes

Rod and screen for hollow bricks of all sizes and hollow cinder blocks with a thickness of ≤ 150 mm

			Nominal diameter of bit	Maximum thickness of part to be fitted	Anchoring depth	Minimum thickness of substrate	Code		
	D	L	d_0	T_{fix}	h_{ef}	h_{min}	Screen 16x85	Zn rod	SST rod
M	8	100	16	11	90	85	344 808	344 822	340 110
M	10	110	16	20	90	85	344 808	344 826	340 112
M	12	115	16	22	90	85	344 808	344 829	340 114

Rod and screen for hollow bricks of all sizes and hollow cinder blocks with a thickness of ≥ 200 mm

			Nominal diameter of bit	Maximum thickness of part to be fitted	Anchoring depth	Minimum thickness of substrate	Code		
	D	L	d_0	T_{fix}	h_{ef}	h_{min}	Screen 16x130	Zn rod	SST rod
M	8	160	16	26	135	130	344 811	344 824	340 116
M	10	160	16	25	135	130	344 811	344 827	340 118
M	12	160	16	22	135	130	344 811	344 830	340 120

Threaded sleeve for hollow bricks and cinder blocks of all sizes

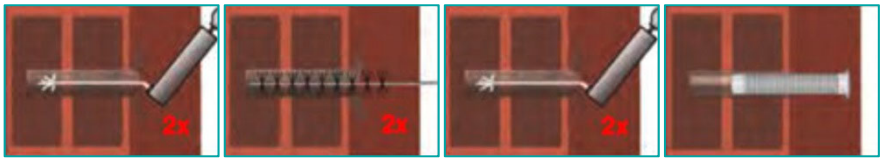
			Nominal diameter of bit	Thread length	Anchoring depth	Minimum thickness of substrate	Code	Dimensions	Code
	D	L	d_0	min/max	h_{ef}	h_{min}	Threaded sleeve	Screen	
M	8	80	16	7/35	85	90	344 839	16x85	344 808
M	10	80	20	8/40	85	90	344 841	20x85	344 814
M	12	80	20	14/40	85	90	344 844	20x85	344 814

Fitting instructions

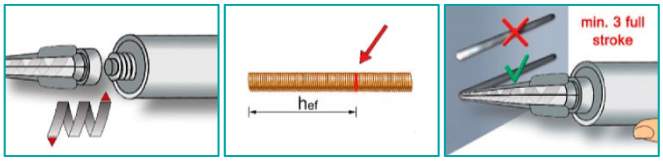
Drill the hole

Using rotation without percussion, adhering to the Hef (anchoring depth) and D_0 (nominal Ø of bit) as defined.

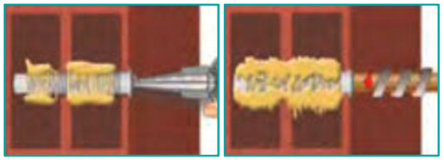
Manually clean the hole and fit the screen



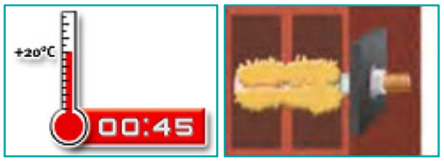
Prepare the cartridge and the anchoring part



Inject the resin and fit the anchoring part



Load time and installation of the part to be fitted



Pre-calculated values with static load

Autoclaved concrete 771-4

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure		d/d installation and use under dry interior conditions		For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C	Ta +24°C	Tb +50°C	For all temperatures Ta and Tb
Autoclaved concrete 771-4					Ultimate traction load in DaN				Ultimate shearing load in DaN
Autoclaved concrete AAC6 	M8 rod without screen	-	80	6	100	100	100	100	225
	M10 rod without screen/M6 threaded sleeve	-	90		125	100	150	125	450
	M12 rod without screen/M8 threaded sleeve	-	100		150	125	225	175	450
	M16 rod without screen/M10 threaded sleeve	-	100		175	150	275	225	550

Sand-lime stonework 771-2

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Sand-lime stonework 771-2					Ultimate traction load in DaN				Ultimate shearing load in DaN
Solid KS-NF sand-lime brick 	M8 rod	-	80	10	120	80			120
	M10 rod/M6 sleeve	-	90						
	M12 rod/M8 sleeve	-	100		160	100			140
	M16 rod/M10 sleeve	-	100		120	80			
	M8 rod	12x80	80		100	80			100
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130		180	120			120
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		100	80			160
		20x130	130		180	100			120
		20x200	200						160
	M8 rod	-	80	20	180	120			180
	M10 rod/M6 sleeve	-	90						
	M12 rod/M8 sleeve	-	100		220	140			200
	M16 rod/M10 sleeve	-	100		180	120			
	M8 rod	12x80	80		160	100			160
	M8 and M10 rod/M6 sleeve	16x85	85						180
		16x130	130		220	160			220
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		180	100			200
		20x130	130		220	160			220
		20x200	200		220				
	M8 rod	-	80	27	220	140			200
	M10 rod/M6 sleeve	-	90						220
	M12 rod/M8 sleeve	-	100		260	180			240
	M16 rod/M10 sleeve	-	100		220	140			
	M8 rod	12x80	80		180	120			180
	M8 and M10 rod/M6 sleeve	16x85	85						220
		16x130	130		240	180			260
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		160	120			220
		20x130	130		240	180			220
		20x200	200						

* Ultimate value to have the service load/1.4

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	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Sand-lime stonework 771-2					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Solid sand-lime brick KS L-3DF 	M8 rod	12x80	80	8	60	36			80
	M8 and M10 rod/M6 sleeve	16x85	85						100
		16x130	130		100	60			120
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60	36			
		20x130	130		100	60			160
		20x200	220						
	M8 rod	12x80	80	12	80	48			100
	M8 and M10 rod/M6 sleeve	16x85	85						140
		16x130	130		140	80			180
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		80	36			140
		20x130	130		140	60			180
		20x200	220						
	M8 rod	12x80	80	14	100	60			120
	M8 and M10 rod/M6 sleeve	16x85	85						160
		16x130	130		160	120			180
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		100	60			
		20x130	130		160	120			200
		20x200	220						240

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Sand-lime stonework 771-2					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Solid sand-lime brick KS I-12DF 	M8 rod	12x80	80	10	16	12			120
	M8 and M10 rod/M6 sleeve	16x85	85		48	36			240
		16x130	130		140	100			280
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		48	36			240
		20x130	130		140	100			280
	M8 rod	12x80	80	12	16	12			140
	M8 and M10 rod/M6 sleeve	16x85	85		60	36			280
		16x130	130		180	120			320
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60	36			280
		20x130	130		180	120			320
	M8 rod	12x80	80	16	20	16			160
	M8 and M10 rod/M6 sleeve	16x85	85		80	48			360
		16x130	130		220	140			400
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		80	48			360
		20x130	130		220	140			400

* Ultimate value to have the service load/1.4

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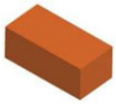
Terracotta stonework 771-1

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Solid brick Mz-DF 	M8 rod	-	80	10	60	48			120
	M10 rod/M6 sleeve	-	90						140
	M12 rod/M8 sleeve	-	100			36			200
	M16 rod/M10 sleeve	-	100		100	60			
	M8 rod	12x80	80		80				120
	M8 and M10 rod/M6 sleeve	16x85	85						140
		16x130	130		120	80			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		80	60			160
		20x130	130		120	80			
	M8 rod	-	80	20	100	60			180
	M10 rod/M6 sleeve	-	90			60			220
	M12 rod/M8 sleeve	-	100		80	60			300
	M16 rod/M10 sleeve	-	100		140	100			
	M8 rod	12x80	80		120	80			120
	M8 and M10 rod/M6 sleeve	16x85	85						140
		16x130	130			100			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85			80			200
		20x130	130		180	120			
	M8 rod	-	80	28	120	80			220
	M10 rod/M6 sleeve	-	90						260
	M12 rod/M8 sleeve	-	100		100	60			360
	M16 rod/M10 sleeve	-	100		180	120			
	M8 rod	12x80	80		140	100			200
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130		200	140			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		140	100			240
		20x130	130		200	140			

* Ultimate value to have the service load/1.4

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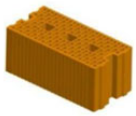
	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick HLz-16DF 	M8 rod	12x80	80	6	48	30			100
	M8 and M10 rod/M6 sleeve	16x85	85		60	48			160
		16x130	130		100	60			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		80				
		20x130	130		100				240
	M8 rod	12x80	80	8	48	36			120
	M8 and M10 rod/M6 sleeve	16x85	85		80	60			180
		16x130	130		120	80			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		100				200
		20x130	130		120				240
	M8 rod	12x80	80	12	60	48			140
	M8 and M10 rod/M6 sleeve	16x85	85		100	60			220
		16x130	130		160	100			240
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		100	80			
		20x130	130		160	100			320
	M8 rod	12x80	80	14	60	48			160
	M8 and M10 rod/M6 sleeve	16x85	85		100	80			220
		16x130	130		140	100			240
	M12 and M16 rod/M8 and M10 sleeve	20x85	85			80			220
		20x130	130			100			360

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick Porotherm 	M8 rod	12x80	80	6	36	30			80
	M8 and M10 rod/M6 sleeve	16x85	85		48				
		16x130	130		60	36			100
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		48				120
		20x130	130		60				
	M8 rod	12x80	80	8	48				100
	M8 and M10 rod/M6 sleeve	16x85	85		48				100
		16x130	130		60	48			120
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		48	36			140
		20x130	130		60	48			
	M8 rod	12x80	80	10	48	36			120
	M8 and M10 rod/M6 sleeve	16x85	85		60				
		16x130	130		80	48			140
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60	36			160
		20x130	130		80	48			

* Ultimate value to have the service load/1.4

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	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick BGV Thermo 	M8 rod	12x80	80	6	20	16			80
	M8 and M10 rod/M6 sleeve	16x85	85		30	20			
		16x130	130		36	30			100
	M12 and M16 rod/M8 and M10 sleeve	20x85	85			20			80
		20x130	130		48				100
	M8 rod	12x80	80	8	24				80
	M8 and M10 rod/M6 sleeve	16x85	85		36	24			100
		16x130	130		48	36			120
	M12 and M16 rod/M8 and M10 sleeve	20x85	85			30			
		20x130	130		60	36			
	M8 rod	12x80	80	10	36	24			
	M8 and M10 rod/M6 sleeve	16x85	85		48	36			140
		16x130	130		60	48			160
	M12 and M16 rod/M8 and M10 sleeve	20x85	85			36			140
		20x130	130			48			160

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick Calibric R+ 	M8 rod	12x80	80	6	30	20			100
	M8 and M10 rod/M6 sleeve	16x85	85						140
		16x130	130		36	24			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		48	30			340
		20x130	130						
	M8 rod	12x80	80	9	36	24			140
	M8 and M10 rod/M6 sleeve	16x85	85						180
		16x130	130		48	30			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60	36			300
		20x130	130						
	M8 rod	12x80	80	12	36	30			160
	M8 and M10 rod/M6 sleeve	16x85	85						220
		16x130	130		48	36			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60	48			340
		20x130	130						

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	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick Urbanbric 	M8 rod	12x80	80	6	36	30			120
	M8 and M10 rod/M6 sleeve	16x85	85		48				140
		16x130	130		60	48			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		48	30			160
		20x130	130		60				
	M8 rod	12x80	80	9	48	36			140
	M8 and M10 rod/M6 sleeve	16x85	85		60				160
		16x130	130		80	60			180
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60	36			200
		20x130	130		80	60			

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick Blocchi Leggeri 	M8 rod	12x80	80	4	16	12			80
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130		20				
	M12 and M16 rod/M8 and M10 sleeve	20x85	85						
		20x130	130						
	M8 rod	12x80	80	6					100
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130		24	16			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85						
		20x130	130						
	M8 rod	12x80	80	8					120
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130			20			
	M12 and M16 rod/M8 and M10 sleeve	20x85	85						
		20x130	130						

* Ultimate value to have the service load/1.4

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	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	d/d and w/w				For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C			For all temperatures Ta and Tb
Terracotta stonework 771-1					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow brick Doppio Uni 	M8 rod	12x80	80	10	36	24			80
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130						
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		48	30			
		20x130	130						
		20x200	200						
	M8 rod	12x80	80	16	36	30			100
	M8 and M10 rod/M6 sleeve	16x85	85		48	48			
		16x130	130						
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		60				
		20x130	130						
		20x200	200						
	M8 rod	12x80	80	20	48	30			120
	M8 and M10 rod/M6 sleeve	16x85	85		60	48			
		16x130	130						
	M12 and M16 rod/M8 and M10 sleeve	20x85	85						
		20x130	130						
		20x200	200						
	M8 rod	12x80	80	28		36			140
	M8 and M10 rod/M6 sleeve	16x85	85			48			
		16x130	130						
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		80				
		20x130	130						
		20x200	200						

Lightweight concrete stonework 771-3

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure		d/d installation and use under dry interior conditions		For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C	Ta +24°C	Tb +50°C	For all temperatures Ta and Tb
Lightweight concrete stonework 771-3					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow stonework in standard concrete B40 hollow cinder block 	M8 rod	12x80	80	4	16	12			48
	M8 rod and M6 sleeve	16x85	85		24	20			120
		16x130	130		80	60			140
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		36	24			120
		20x130	130		80	60			140

* Ultimate value to have the service load/1.4
All of our documents, Technical Datasheet, ETA, DoP (Declaration of Performance), SDS (Safety Datasheet) are available at **www.etanco.eu**

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure		d/d installation and use under dry interior conditions		For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C	Ta +24°C	Tb +50°C	For all temperatures Ta and Tb
Lightweight concrete stonework 771-3					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Concrete brick LAC 	M8 rod	-	80	2	80	60			100
	M10 rod/M6 sleeve	-	90		80	648			140
	M12 rod/M8 sleeve	-	100		100	60			
	M16 rod/M10 sleeve	-							

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure		d/d installation and use under dry interior conditions		For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C	Ta +24°C	Tb +50°C	For all temperatures Ta and Tb
Lightweight concrete stonework 771-3					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Hollow stonework in standard concrete – Leca lex harkko RUH-200 	M8 rod	12x80	80	2.7	80	48			100
	M8 and M10 rod/M6 sleeve	16x85	85						140
		16x130	130						
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		100	60			
		20x130	130						
		20x200	200						

	Large parts	Screen	Anchoring depth h_{ef}	Resistance to substrate compression [N/mm²]	w/w installation in wet or dry structure		d/d installation and use under dry interior conditions		For all types of installation w/w and d/d
					Ta +24°C	Tb +50°C	Ta +24°C	Tb +50°C	For all temperatures Ta and Tb
Lightweight concrete stonework 771-3					Ultimate traction load in DaN*				Ultimate shearing load in DaN
Lightweight concrete block- Leca lex harkko RUH-200 Kulma 	M8 rod	-	80	3	80	48			120
	M10 rod/M6 sleeve	-	90		120	60			160
	M12 rod/M8 sleeve	-	100						
	M16 rod/M10 sleeve	-							
	M8 rod	12x80	80		80				140
	M8 and M10 rod/M6 sleeve	16x85	85						
		16x130	130		120	80			120
	M12 and M16 rod/M8 and M10 sleeve	20x85	85		80	60			160
		20x130	130		120	80			180
		20x200	200						

* Ultimate value to have the service load/1.4

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