

## Declaration of Performance

DoP-07/0291-KI-10M

### 1. Unique identification code of the product-type:

KI-10M



The photo depicts an example of a product of the given type of goods

### 2. Intended use/es:

general type  
to be applied in

Plastic anchor

Nailed-in plastic anchors for fixing of external thermal insulation composite systems with rendering in concrete and masonry

option / category

ETAG 014

Loading

subject to wind suction

material

KOELNER KI-10 nailed-in plastic anchor consists of anchor sleeve with a plate made of polypropylene and an accompanying specific nail as an expansion pin made of glass fibre reinforced polypropylene. KOELNER KI-10 PA nailed-in plastic anchor consists of anchor sleeve with a plate made of polypropylene and an accompanying specific nail as an expansion pin made of glass fibre reinforced polyamide. KOELNER KI-10 M nailed-in plastic anchor consists of anchor sleeve with a plate made of polypropylene and an accompanying specific nail as an expansion pin made of steel. KOELNER KI-10, KOELNER KI-10PA and KOELNER KI-10M anchors may in addition be combined with the plates KWL-90, KWL-110 and KWL-140. Natural, "finke" blue, blue 5010, brown 8017, red 3000, red 2008, white 9003, black, green 6029, yellow 1020, grey 7040, red.

### 3. Manufacturer:

**Rawlplug S.A.**

**ul. Kwidzyńska 6, 51-416 Wrocław, PL**

**[www.rawlplug.com](http://www.rawlplug.com)**

### 4. System/s of AVCP:

System 2+

### 5. European Assessment Document:

ETAG 014 Plastic anchors for fixing of external thermal insulation composite systems with rendering (2011)  
Utilization category: A, B, C, D, E

### 6. European Technical Assessment:

ETA-07/0291 edition of 2014-06-30

### 7. Technical Assessment Body:

Instytut Techniki Budowlanej

### 8. Notified body/ies:

**1488** on the basis of:

- initial inspection of the manufacturing plant and of factory production control
- continuing surveillance, assessment and evaluation of factory production control

issued a certificate **1488-CPR-0368/Z**

## 9. Declared performance/s:

Essential Characteristics:

Technical Specification	Basic requirements according to CPR		Remarks:
ETA-07/0291	[1]	Mechanical resistance and stability	Declared values on the page 2
	[4]	Operational safety	Such criteria as those significant for [1]

Characteristic resistance to tension loads $N_{Rk}$ kN in concrete and in masonry for single anchor							
Base material	Bulk density [kg/dm <sup>3</sup> ]	Minimum compressive strength [N/mm <sup>2</sup> ]	Referring standard	$N_{Rk}$ [kN]			Drill method
				KI-10	KI-10PA	KI-10M	
Concrete C12/15			EN 206-1	0,5	0,4	0,5	hammer
Concrete C16/20 ÷ C50/60			EN 206-1	0,5	0,4	0,5	
Clay brick	≥ 1,70	30,0	EN 771-1	0,5	0,4	0,4	
Calcium silicate brick (for example Kalksandstein KS NF 20-2.0 Vollstein according to DIN 106)	≥ 2,00	20,0	EN 771-2	0,6	0,4	0,6	hammer
Calcium silicate hollow block (for example Kalksandstein KS L-R(P) 8 DF Lochstein according to DIN 106); $a^1 = 30$ mm	≥ 1,60	12,0	EN 771-2	0,6	0,4	0,5	rotary
Perforated ceramic brick (for example Hlz B – 1.0 1NF 12-1 according to DIN 105); $a^1 = 13$ mm	≥ 0,95	12,0	EN 771-1	0,4	0,3	0,4	rotary
Perforated ceramic brick (for example Hlz B – 1.0 3NF 12-1 according to DIN 105); $a^1 = 13$ mm	≥ 0,95	12,0	EN 771-1	0,4	0,4	0,4	rotary
Vertically perforated porosited block (for example Porothersm 25 P+W); $a^1 = 10$ mm	≥ 0,80	15,0	EN 771-1	0,4	0,4	0,3	rotary
Vertically perforated ceramic block (for example MEGA-MAX 250); $a^1 = 12$ mm	≥ 0,80	15,0	EN 771-1	0,3	0,4	0,3	rotary
Lightweight concrete hollow block (for example Hbl according to DIN 18151); $a^1 = 30$ [mm]	≥ 0,80	2,0	EN 771-3	0,4	0,4	0,4	rotary
Lightweight concrete block	≥ 1,56	20,0	EN 771-3	0,5	0,75	0,6	hammer
Autoclaved aerated concrete block	≥ 0,35	2,0	EN 771-4	0,1	0,1	0,1	rotary
Partial safety factor for anchor resistance $\gamma_M^2$	2,0						

<sup>1)</sup> Minimum values "a". For elements with lower value of "a" the load tests on the construction are required

<sup>2)</sup> Valid in absence of national regulations

Minimum thickness of base material, edge distance and anchor spacing	
Anchor type	KI-10;KI-10PA;KI-10M
Minimum thickness of base material $h$ [mm]	100
Minimal spacing $S_{\min}$ [mm]	100
Minimum edge distance $C_{\min}$ [mm]	100

Point thermal transmittance according to EOTA Technical Report TR 025		
Anchor type	Insulation thickness $H_D$ [mm]	Point thermal transmittance $\alpha$ [W/K]
KI-10;KI-10PA	45-195	0
KI-10M	45	0,006
	150	0,004
	195	0,004
	235	0,003

Plate stiffness according to EOTA Technical Report TR 026			
Anchor type	Diameter of the anchor plate $d_{\text{plate}}$ [mm]	Load resistance of the anchor plate $N_{u,m}$ [kN]	Plate stiffness $N_{0,m}$ [kN/mm]
KI-10;KI-10PA	60	2,1	0,5
KI-10M		2,6	0,4

Displacement behaviour								
Base material	Bulk density [kg/dm <sup>3</sup> ]	Compressive strength [N/mm <sup>2</sup> ]	$N_{Rk}/3$ , [kN]			$\delta(N_{Rk}/3)$ [mm]		
			KI-10	KI-10PA	KI-10M	KI-10	KI-10PA	KI-10M
Concrete C20/25	–	–	0,17	0,13	0,17	0,60	0,95	0,63
Concrete C50/60	–	–	0,17	0,13	0,17	0,60	0,95	0,63
Clay brick	$\geq 1,70$	$\geq 30,0$	0,17	0,13	0,13	0,93	1,05	0,76
Calcium silicate brick (for example Kalksandstein KS NF 20-2.0 Vollstein according to DIN 106)	$\geq 2,00$	$\geq 20,0$	0,20	0,13	0,20	0,86	0,96	0,75
Calcium silicate hollow block (for example Kalksandstein KS L-R(P) 8 DF Lochstein according to DIN 106); $a^{1)} = 30$ mm	$\geq 1,60$	$\geq 12,0$	0,20	0,13	0,17	0,73	0,90	0,57

Perforated ceramic brick (for example Hz B – 1.0 1NF 12-1 according to DIN 105); a <sup>1)</sup> = 13 mm	≥ 0,95	≥ 12,0	0,13	0,10	0,13	0,84	0,67	0,52
Perforated ceramic brick (for example Hz B – 1.0 3NF 12-1 according to DIN 105); a <sup>1)</sup> = 13 mm	≥ 0,95	≥ 12,0	0,13	0,13	0,13	0,59	0,84	0,64
Vertically perforated porosited block (for example Porotherm 25 P+W); a <sup>1)</sup> = 10 mm	≥ 0,80	≥ 15,0	0,13	0,13	0,10	0,56	0,60	0,49
Vertically perforated ceramic block (for example MEGA-MAX 250); a <sup>1)</sup> = 12 mm	≥ 0,80	≥ 15,0	0,10	0,13	0,10	0,61	0,64	0,74
Lightweight concrete hollow block (for example Hbl according to DIN 18151); a <sup>1)</sup> = 30 [mm]	≥ 0,80	≥ 2,0	0,13	0,13	0,13	0,53	0,72	0,57
Lightweight concrete block	≥ 1,56	≥ 20,0	0,17	0,25	0,20	0,99	0,92	0,61
Autoclaved aerated concrete block	≥ 0,35	≥ 2,0	0,03	0,03	0,03	0,50	0,41	0,40

<sup>1)</sup> Minimum values "a". For elements with lower value of "a" the load tests on the construction are required

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 manufacturer:

Sławomir Jagła  
Proxy of the Quality Management System  
Wrocław, 13.07.2015.

PEŁNOMOCNIK SYSTEMU  
ZARZĄDZANIA JAKOŚCIĄ

*Jagła*  
mgr Sławomir Jagła