

**DoP no. 1488-CPR-0671/W/07.18**
**1. Unique product identification code:**

SLP-H M8 x L, SLP-H M10 x L, SLP-H M12 x L, SLP-H M16 x L, SLP-H M20 x L

**2. Intended use or uses:** The anchors are intended to be used only for anchorages subject to static or quasi-static loading in reinforced or unreinforced concrete classes C20/25 at minimum and C/50/60 at maximum. The anchors may be used in non-cracked, in only structures subject to dry internal conditions. According to Annex B1 ETA-18/0186. Use category EAD 330232-00-0601 option 7.

**3. Manufacturer:** P.H. „HAMAR” Sp. J. B. i H. Grzesiak, ul. Hutnicza 7, 81-061 Gdynia, Poland

**4. Authorized representative:** NA

**5. System of assessment and verification of constancy of performance:** System 1

**6. European Technical Assessment:** ETA-18/0186 issued 29.03.2018

**Technical Assessment Body:** Instytut Techniki Budowlanej, ul. Filtrowa 1, 00-611 Warszawa

**Notified body:** Notified body no. 1488

Certificate of constancy of performance 1488-CPR-0671/W

**7. Declared performance:**

Essentials characteristic	Performance				
	M8	M10	M12	M16	M20
<b>Installation parameters</b>					
Effective anchorage depth $h_{ef}$ [mm]	40	45	70	80	100
Nominal diameter $d_{nom}$ [mm]	8	10	12	16	20
Cutting diameter of drill bit $d_{cut}$ [mm]	8,45	10,50	12,50	16,50	20,50
Thickness of the fixture $t_{fix}$ [mm]	1-140	1-150	1-210	1-190	1-170
Anchors length $L$ [mm]	[60-200]	[75-235]	[90-300]	[100-300]	[130-300]
Depth of drill hole $h_1 \geq$ [mm]	45	50	75	85	130
Diameter of clearance hole in fixture $d_f \leq$ [mm]	9	12	14	18	20
Installation torque $T_{inst}$ [Nm]	20	30	50	120	180
Minimum thickness of member $h_{min}$ [mm]	100	120	150	170	200
Minimum spacing $s_{min}$ [mm]	40	45	70	80	100
Minimum edge distance $c_{min}$ [mm]	60,0	67,5	105,0	120,0	150,0
<b>Characteristic tension loads [kN]</b>	<b>M8</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>	<b>M20</b>
Steel failure $N_{Rk,s}$	24,9	39,4	57,3	106,8	166,6
Pull-out failure from non-cracked concrete C20/25 $N_{Rk,p}$	7,5	9	25	35	50
<b>Concrete cone failure [mm]</b>	<b>M8</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>	<b>M20</b>
Effective anchorage depth $h_{ef}$	40	45	70	80	100
Characteristic spacing $s_{cr,N}$	120	135	210	240	300
Characteristic edge distance $c_{cr,N}$	60	67,5	105	120	150
Reaction to fire	Class A1				

 Harmonized Technical Specification  
ETA-18/0186

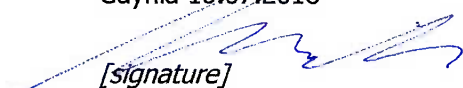
**8. Relevant technical documentation or specific technical documentation:** European Assessment Document (EAD) 330232-00-0601 "Mechanical fasteners for use in concrete", European Technical Assessment ETA-18/0186 issued 29.03.2018.

**The performance of the product identified above is in conformity with the set of declared performances. 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 the manufacturer by:

Bogusław Grzesiak – Partner

Gdynia 10.07.2018



[signature]