



Chemische verankering voor
middelzware belasting in vol
en hol metselwerk.



[ETA-19/0421](#), [ETA-19/0642](#), [NL-DoP-e19/0421](#)

KENMERKEN



Materiaal

- Styreenvrij polyesterhars,
- Draadstang LMAS : elektrolytisch verzinkt staal en rvs A4-70.

Voordelen

- Snel uithardend : tijdwinst voor de gebruiker,
- Geschikt voor binnengebruik,
- Uitstekende duurzaamheid.



TOEPASSINGEN

Ondergrond

- Vol en hol metselwerk.

Toepassingsgebieden

- Rolluiken, luikhengsels,
- Airconditioners,
- Antennes,
- Waterverwarmers.

TECHNISCHE GEGEVENS

Références

Referentie	Product information				
	Grey color	Beige color	Content [ml]	Weigth [kg]	Packaging qty [pcs]
POLYGP300G-FR	x	-	300	0.586	12
POLYGP300G-ES	x	-	300	0.586	12
POLYGP300B-FR	-	x	300	0.586	12
POLYGP420B-FR	-	x	420	0.842	12
POLYGP300GB-PL	-	x	300	0.586	12
POLYGP420B-PL	-	x	420	0.842	12

Design resistance – Tension – NRd [kN] – Carbon steel 5.8

Referentie	Design resistance – NRd – Carbon steel 5.8 [kN]							
	Non-cracked concrete							
	hef = 8d				hef = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GP + LMAS M8	4.6	5	5.3	5.5	6.9	7.4	7.9	8.2
POLY-GP + LMAS M10	7.7	8.3	8.8	9.1	11.5	12.4	13.2	13.7
POLY-GP + LMAS M12	10	10.9	11.6	12	15.1	16.3	17.3	17.9
POLY-GP + LMAS M16	14.3	15.4	16.4	17	21.4	23.2	24.7	25.5

Concrete :

- The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10mm or smaller.
- The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
- Concrete is considered non-cracked when the tensile stress within the concrete $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Tension – NRd [kN] – Stainless steel A4-70

Referentie	Design resistance – NRd – Stainless steel A4-70 [kN]							
	Non-cracked concrete							
	hef = 8d				hef = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GP + LMAS M8	4.6	5	5.3	5.5	6.9	7.4	7.9	8.2
POLY-GP + LMAS M10	7.7	8.3	8.8	9.1	11.5	12.4	13.2	13.7
POLY-GP + LMAS M12	10	10.9	11.6	12	15.1	16.3	17.3	17.9
POLY-GP + LMAS M16	14.3	15.4	16.4	17	21.4	23.2	24.7	25.5

Concrete :

1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Shear – V_{Rd} [kN] – Carbon steel 5.8

Referentie	Design resistance – V_{Rd} – Carbon steel 5.8 [kN]							
	Non-cracked concrete							
	$h_{ef} = 8d$				$h_{ef} = 12d$			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GP + LMAS M8	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
POLY-GP + LMAS M10	12	12	12	12	12	12	12	12
POLY-GP + LMAS M12	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
POLY-GP + LMAS M16	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2

Concrete :

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3. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Shear – V_{Rd} [kN] – Stainless steel A4-70

Referentie	Design resistance – V_{Rd} – Stainless steel A4-70 [kN]							
	Non-cracked concrete							
	$h_{ef} = 8d$				$h_{ef} = 12d$			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GP + LMAS M8	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
POLY-GP + LMAS M10	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
POLY-GP + LMAS M12	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
POLY-GP + LMAS M16	34.3	34.3	34.3	34.3	35.3	35.3	35.3	35.3

Concrete :

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2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Bending moment – MRd [Nm]

Referentie	Design resistance – Bending moment – MRd [Nm]	
	Carbon steel 5.8	Stainless steel A4-70
POLY-GP + LMAS M8	15.2	16.7
POLY-GP + LMAS M10	29.6	34
POLY-GP + LMAS M12	52.8	59
POLY-GP + LMAS M16	133.6	149.4

Concrete :

1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10mm or smaller.
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3. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – hef = 80 mm ($\leq M8$) or 85 mm ($\geq M10$) – Carbon steel ≥ 4.6 / Stainless steel $\geq A2-70$

Referentie	Design resistance – Carbon steel ≥ 4.6 / stainless steel $\geq A2-70$			
	$h_{ef} = 80 \text{ mm } (\leq M8) \text{ or } 85 \text{ mm } (\geq M10)$			
	Tension - NRd [kN]		Shear - VRd [kN]	
	Solid Clay Masonry	Hollow Masonry	Solid Clay Masonry	Hollow Masonry
POLY-GP + LMAS M6	1.6	0.8	2.4	0.8
POLY-GP + LMAS M8	1.6	0.8	2.4	0.8
POLY-GP + LMAS M10	1.6	0.8	2.8	0.8
POLY-GP + LMAS M12	1.6	0.8	2.8	0.8

Masonry :

	Compressive strength f_b [N/mm ²]	Bulk density ρ [kg/m ³]
Solid clay masonry	≥ 18	≥ 1600
Hollow masonry	≥ 6	≥ 900

1. The design resistances have been calculated using the partial safety factors for resistances stated in ETA-approval(s).
2. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of $\gamma F = 1.4$.
3. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation acc. TR 054, design method A shall be performed. For details see ETA - assessment(s)
4. Temperature range: $-40^\circ\text{C}/+40^\circ\text{C}$ ($T_{mp} = +24^\circ\text{C}$)
5. Coefficient factor β for in situ tests acc. ETAG 029 see ETA-19/0642; Annex C2
6. Displacements under service load see ETA-19/0642; Annex C2 & C3

Design resistance – Bending moment – MRd [Nm]

Referentie	Design resistance – Bending moment – MRd [Nm]		
	Carbon steel 5.8	Carbon steel 8.8	Stainless steel $\geq A2-70$
POLY-GP + LMAS M6	6.4	9.6	7.1
POLY-GP + LMAS M8	15.2	24	16.7
POLY-GP + LMAS M10	29.6	48	33.3
POLY-GP + LMAS M12	52.8	84	59

Masonry :

	Compressive strength f_b [N/mm ²]	Bulk density [kg/m ³]

Solid clay masonry	≥ 18	≥ 1600
Hollow masonry	≥ 6	≥ 900

1. The design resistances have been calculated using the partial safety factors for resistances stated in ETA-approval(s).
2. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of $\gamma F=1.4$.
3. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation acc. TR 054, design method A shall be performed. For details see ETA - assessment(s)
4. Temperature range: $-40^{\circ}\text{C}/+40^{\circ}\text{C}$ (T_{mlp} = $+24^{\circ}\text{C}$)
5. Coefficient factor β for in situ tests acc. ETAG 029 see ETA-19/0642; Annex C2
6. Displacements under service load see ETA-19/0642; Annex C2 & C3

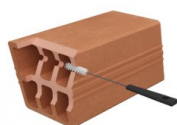
PLAATSING

Plaatsingstijd

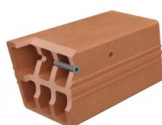
Temperatuur [°C]	-5	0	5	10	15	20	30
Verwerkingstijd	25min	15min	12min	8min	7min	4min	2min
Belastbaar na	4.00	3.00	2.30	1.15	55min	30min	20min



1. Gat boren.



2. Schoonborstelen.



3. Zeefhuls insteken.



4. Vullen vanaf bodemgat naar buiten door bij het pompen telkens één maatstreep op de spuitmond achteruit te gaan.



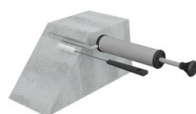
5. Ankerstang licht draaiend insteken.



Fix when the curing time is reached.



1. Gat boren.



2. Boorgat reinigen door uitborstelen en uitblazen zoals aangegeven op de patroon.



3. Gat voor de helft tot twee derde vullen vanaf het bodemgat naar buiten door bij het pompen telkens één maatstreep op de spuitmond achteruit te gaan.



4. Draadstang insteken door langzaam van links naar rechts te draaien. U kunt de draadstang verplaatsen of hars toevoegen zolang de verwerkingstijd niet bereikt is.



5. Vastzetten na het bereiken van de uithardingstijd.

Installation parameters – Concrete

Referentie	Installation parameters - Concrete					
	Ø drilling [d ₀] [mm]	Max. fixture hole Ø [d _f] [mm]	Drilling depth (8d) [h ₀ =h _{ef} =8d] [mm]	Drilling depth (12d) [h ₀ =h _{ef} =12d] [mm]	Wrench size [SW]	Installation torque [T _{inst}] [Nm]
POLYGP300G-FR	-	-	-	-	-	-
POLYGP300G-ES	-	-	-	-	-	-
POLYGP300B-FR	-	-	-	-	-	-
POLYGP420B-FR	-	-	-	-	-	-
POLYGP300GB-PL	-	-	-	-	-	-
POLYGP420B-PL	-	-	-	-	-	-

Referentie	Installation parameters - Concrete					
	Ø drilling [d ₀] [mm]	Max. fixture hole Ø [d _i] [mm]	Drilling depth (8d) [h ₀ =h _{ef} =8d] [mm]	Drilling depth (12d) [h ₀ =h _{ef} =12d] [mm]	Wrench size [SW]	Installation torque [T _{inst}] [Nm]
POLY-GP + LMAS M6	-	-	-	-	-	-
POLY-GP + LMAS M8	10	9	64	96	13	8
POLY-GP + LMAS M10	12	12	80	120	17	10
POLY-GP + LMAS M12	14	14	96	144	19	15
POLY-GP + LMAS M16	18	18	128	192	24	25

Spacing, edge distances and member thickness – Concrete

Referentie	Spacing, edge distance and member thickness - Concrete											
	Effective embedment depth (8d) [h _{ef,8d}] [mm]	Characteristic spacing for h _{ef,8d} [S _{cr,N}] [mm]	Characteristic edge distance for h _{ef,8d} [C _{cr,N}] [mm]	Min. member thickness for h _{ef,8d} [h _{min}] [mm]	Effective embedment depth (12d) [h _{ef,12d}] [mm]	Characteristic spacing for h _{ef,12d} [S _{cr,N}] [mm]	Characteristic edge distance for h _{ef,12d} [C _{cr,N}] [mm]	Min. member thickness for h _{ef,12d} [h _{min}] [mm]	Min. spacing [S _{min}] [mm]		Min. edge distance [C _{min}] [mm]	
									8d	12d	8d	12d
POLYGP3000FR	-	-	-	-	-	-	-	-	-	-	-	-
POLYGP3000G-ES	-	-	-	-	-	-	-	-	-	-	-	-
POLYGP3000BFR	-	-	-	-	-	-	-	-	-	-	-	-
POLYGP4200BFR	-	-	-	-	-	-	-	-	-	-	-	-
POLYGP3000GPL	-	-	-	-	-	-	-	-	-	-	-	-
POLYGP4200BPL	-	-	-	-	-	-	-	-	-	-	-	-
POLY-GP + LMAS M6	-	-	-	-	-	-	-	-	-	-	-	-
POLY-GP + LMAS M8	64	192	96	100	96	288	144	126	32	48	32	48
POLY-GP + LMAS M10	80	240	120	110	120	360	180	150	40	60	40	60
POLY-GP + LMAS M12	96	288	144	126	144	432	216	174	48	72	48	72
POLY-GP + LMAS M16	128	384	192	158	192	576	288	222	64	96	64	96

Installation parameters – Masonry – Solid clay masonry

Referentie	Installation parameters - Solid clay masonry			
	Ø drilling [d ₀] [mm]	Max. fixture hole Ø [d _i] [mm]	Drilling depth [h ₁] [mm]	Installation torque [T _{inst}] [Nm]
POLYGP3000G-FR	-	-	-	-
POLYGP3000G-ES	-	-	-	-
POLYGP3000B-FR	-	-	-	-
POLYGP4200B-FR	-	-	-	-
POLYGP3000GB-PL	-	-	-	-

Referentie	Installation parameters - Solid clay masonry			
	Ø drilling [d ₀] [mm]	Max. fixture hole Ø [d _f] [mm]	Drilling depth [h ₁] [mm]	Installation torque [T _{inst}] [Nm]
POLYGP420B-PL	-	-	-	-
POLY-GP + LMAS M6	8	7	85	2
POLY-GP + LMAS M8	10	9	85	2
POLY-GP + LMAS M10	12	12	90	2
POLY-GP + LMAS M12	14	14	90	2
POLY-GP + LMAS M16	-	-	-	-

Installation parameters – Masonry – Hollow masonry

Referentie	Installation parameters - Hollow masonry			
	Ø drilling [d ₀] [mm]	Max. fixture hole Ø [d _f] [mm]	Drilling depth [h ₁] [mm]	Installation torque [T _{inst}] [Nm]
POLYGP300G-FR	-	-	-	-
POLYGP300G-ES	-	-	-	-
POLYGP300B-FR	-	-	-	-
POLYGP420B-FR	-	-	-	-
POLYGP300GB-PL	-	-	-	-
POLYGP420B-PL	-	-	-	-
POLY-GP + LMAS M6	12	7	85	1.5
POLY-GP + LMAS M8	12	9	85	1.5
POLY-GP + LMAS M10	16	12	90	1.5
POLY-GP + LMAS M12	16	14	90	1.5
POLY-GP + LMAS M16	-	-	-	-

Spacing, edge distances and member thickness – Masonry – Solid clay masonry

Referentie	Spacing, edge distance and member thickness - Solid clay masonry			
	Min. spacing [S _{min}] [mm]			Min. edge distance [C _{min}] [mm]
	S _{cr,N} = S _{min}	S _{cr,N} # = S _{min} #	S _{cr,N} ^T = S _{min} ^T	C _{cr,N} = C _{min}
POLYGP300G-FR	-	-	-	-
POLYGP300G-ES	-	-	-	-
POLYGP300B-FR	-	-	-	-
POLYGP420B-FR	-	-	-	-
POLYGP300GB-PL	-	-	-	-
POLYGP420B-PL	-	-	-	-
POLY-GP + LMAS M6	240	-	-	120
POLY-GP + LMAS M8	240	-	-	120
POLY-GP + LMAS M10	255	-	-	127.5
POLY-GP + LMAS M12	255	-	-	127.5
POLY-GP + LMAS M16	-	-	-	-

Spacing, edge distances and member thickness – Masonry – Hollow masonry

Referentie	Spacing, edge distance and member thickness - Hollow masonry			
	Min. spacing [S _{min}] [mm]			Min. edge distance [C _{min}] [mm]
	S _{cr,N} = S _{min}	S _{cr,N} # = S _{min} #	S _{cr,N} ^T = S _{min} ^T	C _{cr,N} = C _{min}
POLYGP300G-FR	-	-	-	-
POLYGP300G-ES	-	-	-	-
POLYGP300B-FR	-	-	-	-
POLYGP420B-FR	-	-	-	-
POLYGP300GB-PL	-	-	-	-
POLYGP420B-PL	-	-	-	-

Referentie	Spacing, edge distance and member thickness - Hollow masonry			
	Min. spacing [S_{min}] [mm]			Min. edge distance [C_{min}] [mm]
	$S_{cr,N} = S_{min}$	$S_{cr,N} \# = S_{min} \#$	$S_{cr,N}^T = S_{min}^T$	$C_{cr,N} = C_{min}$
POLY-GP + LMAS M6	-	250	120	100
POLY-GP + LMAS M8	-	250	120	100
POLY-GP + LMAS M10	-	250	120	100
POLY-GP + LMAS M12	-	250	120	100
POLY-GP + LMAS M16	-	-	-	-