

**TECHNICAL DATA SHEET**

**GX-L NYLON long multipurpose plastic anchor**

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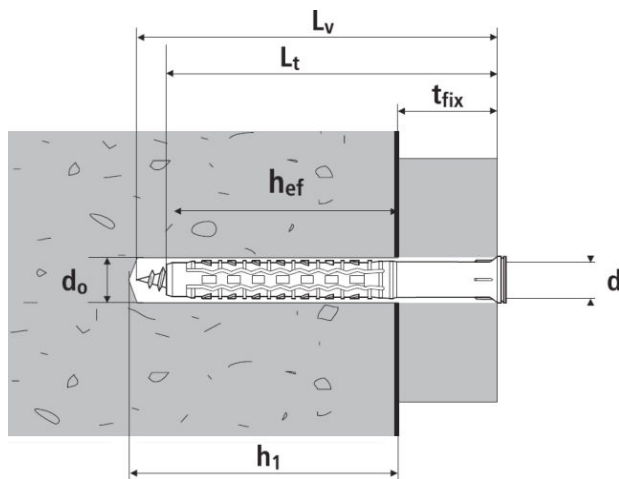


**Certificates**

ETA-12/0261 Certification for multiple use in concrete and masonry, Fire Resistance 90 min for 10 mm diameter anchor

**Base material**

certified use	specific use	suitable use
concrete solid masonry perforated masonry hollow masonry	natural stone hollow concrete blocks	plasterboard cellular concrete



- $d_0$  = plug diameter
- $d$  = hole diameter
- $L_t$  = plug length
- $h_1$  = minimum hole depth
- $h_{nom}$  = nominal embedment depth
- $h_{ef}$  = effective anchorage depth
- $d_v$  = screw diameter
- $L_v$  = screw length
- $t_{fix}$  = fixable thickness

$d_0 = d$   
 $h_{ef} = h_{nom}$

$L_t = h_{nom} + t_{fix}$

**GX-L Nylon**

Ø6 and Ø8 with POZIDRIV countersunk screw  
case-hardened, zinc-plated



art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	drive
97099 <sup>1</sup>	GXL660V	6	60	20	50	40	4	65	PZ2
97001	GXL880V	8	80	10	80	70	5.5	85	PZ3
97002	GXL8100V		100	30				105	
97003	GXL8120V		120	50				125	
97004	GXL8140V		140	70				145	

<sup>1</sup> not included in CE certification

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**GX-L Nylon**

 Ø8 with TORX countersunk screw  
 case-hardened, zinc-plated


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	drive
97005	GXL880VT	8	80	10	80	70	5.5	85	T30
97006	GXL8100VT		100	30				105	
97007	GXL8120VT		120	50				125	
97035	GXL8140VT		140	70				145	
97177	GXL8170VT		170	100				175	
97178	GXL8200VT		200	130				205	

**GX-L Nylon**

 Ø10 with TORX countersunk screw  
 class 5.8 zinc-plated


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	drive
97008	GXL1080VT	10	80	10	80	70	7	85	T40
97009	GXL10100VT		100	30				105	
97010	GXL10120VT		120	50				125	
97011	GXL10140VT		140	70				145	
97012	GXL10160VT		160	90				165	
97013	GXL10200VT		200	130				205	
97014	GXL10240VT		240	170				245	
97015	GXL10260VT		260	190				265	

**GX-L Nylon**

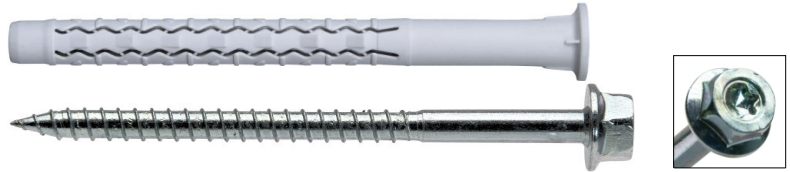
 with TORX countersunk screw  
 stainless steel A4 (AISI 316)


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	drive	
97175	GXL880VTI	8	80	10	80	70	5.5	85	T30	
97183	GXL8100VTI		100	30				105		
97184	GXL8120VTI		120	50				125		
97016	GXL1080VTI	10	80	10			7	7	85	T40
97017	GXL10100VTI		100	30					105	
97018	GXL10120VTI		120	50					125	
97019	GXL10140VTI		140	70	145					
97020	GXL10160VTI		260	190			265			

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**GX-L NYLON long multipurpose plastic anchor**

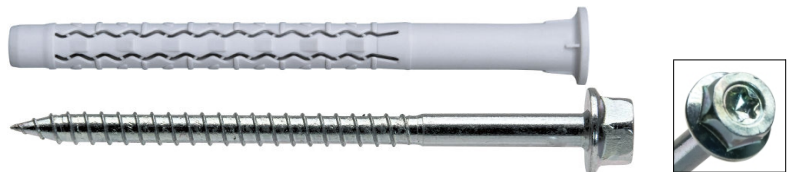
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**GX-L Nylon**

 Ø10 with collar, with hexagonal TORX flanged screw  
 class 5.8, zinc-plated,


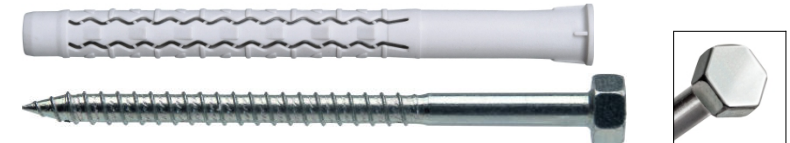
art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	ch.	drive	Ø head mm
97030	GXL1080VEFT	10	80	10	80	70	7	85	13	T40	17.7
97031	GXL10100VEFT		100	30				105			
97032	GXL10120VEFT		120	50				125			
97033	GXL10140VEFT		140	70				145			
97034	GXL10160VEFT		160	90				165			

**GX-L Nylon**

 Ø10 with collar, with hexagonal TORX flanged screw  
 stainless steel A4 (AISI 316)


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	ch.	drive	Ø head mm
97214	GXL1080VEFTI	10	80	10	80	70	7	85	13	T40	17.7
97215	GXL10100VEFTI		100	30				105			
97216	GXL10120VEFTI		120	50				125			

**GX-L Nylon**

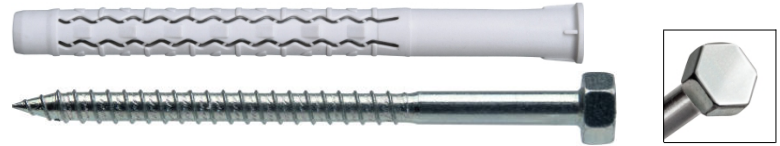
 Ø8 with hexagonal screw  
 case-hardened, zinc-plated


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	span
97126	GXL880VE	8	80	10	80	70	5.5	85	10
97127	GXL8100VE		100	30				105	
97128	GXL8120VE		120	50				125	

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**GX-L NYLON long multipurpose plastic anchor**

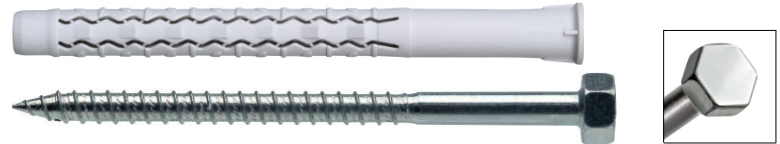
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**GX-L Nylon**

 Ø10 with hexagonal screw  
 class 5.8, zinc-plated


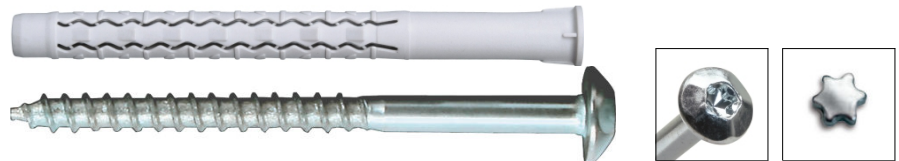
art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	span
97022	GXL1080VE	10	80	10			7	85	13
97023	GXL10100VE		100	30				105	
97024	GXL10120VE		120	50				125	
97025	GXL10140VE		140	70				145	
97026	GXL10160VE		160	90				165	
97027	GXL10200VE		200	130				205	
97028	GXL10240VE		240	170				245	
97029	GXL10260VE		260	190				265	

**GX-L Nylon**

 Ø10 with hexagonal screw  
 stainless steel A4 (AISI 316)


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	span
97118	GXL1080VEI	10	80	10	80	70	7	85	13
97119	GXL10100VEI		100	30				105	
97120	GXL10120VEI		120	50				125	

**GX-L Nylon**

 Ø10 with VAST anti-theft screw, TORX  
 zinc-plated, with bit


art.	descr.	d mm	L <sub>t</sub> mm	t <sub>fix</sub> mm	h <sub>1</sub> mm	h <sub>ef</sub> mm	d <sub>v</sub> mm	L <sub>v</sub> mm	drive	Ø head mm
97089 <sup>1</sup>	GXL1080VA	10	80	10	80	70	7	85	T40	16.5
97090 <sup>1</sup>	GXL10100VA		100	30				105		
97091 <sup>1</sup>	GXL10120VA		120	50				125		
97092 <sup>1</sup>	GXL10140VA		140	70				145		
97093 <sup>1</sup>	GXL10160VA		160	90				165		

<sup>1</sup> not included in CE certification

**Materials**

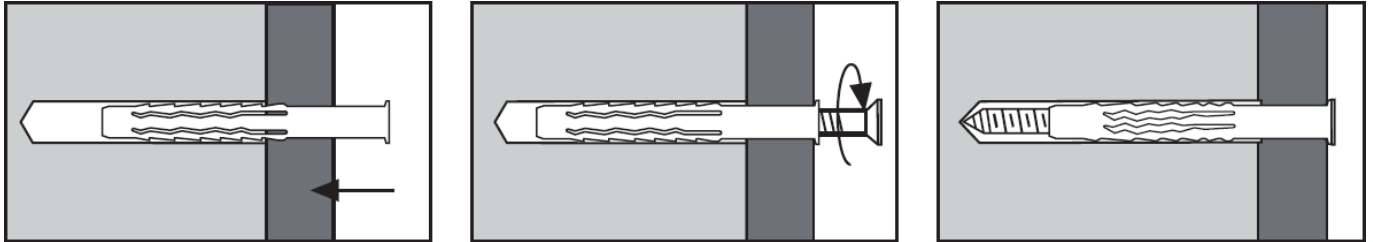
part	material	surface
plug	polyamide (Nylon) grey RAL 7035	-
screws (5.5 mm diameter, zinc-plated)	case-hardened carbon steel	white zinc plating ≥ 5 µm ISO 4042
screws (7.0 mm diameter, zinc-plated)	steel class 5.8	white zinc plating ≥ 5 µm ISO 4042
screws (stainless steel)	AISI 316 (A4) steel	-

**TECHNICAL DATA SHEET**

**GX-L NYLON long multipurpose plastic anchor**

• **Use on concrete**

**Installation**



**Setting parameters**

size		GX-L 6 <sup>1</sup>	GX-L 8		GX-L 10	
base material		concrete	concrete C12/15	concrete ≥ C16/20	concrete C12/15	concrete ≥ C16/20
hole diameter	d <sub>0</sub> mm	6	8		10	
hole depth	h <sub>1</sub> mm	50	80			
nominal embedment depth	h <sub>nom</sub> mm	40	70			
effective anchorage depth	h <sub>ef</sub> mm	40	70			
min. base material thickness	h <sub>min</sub> mm	70	100			
critical edge distance	c <sub>cr</sub> mm	100	100	70	140	100
minimum edge distance	c <sub>min</sub> mm	70	70	50	70	50
minimum spacing	s <sub>min</sub> mm	70	70	50	85	60
tightening torque	T <sub>inst</sub> Nm	2	8		16.5	

<sup>1</sup> not included in CE certification

**Strength data**

Valid for a single anchor far from the edges, on a thick concrete member

**Characteristic resistance (kN)**

size			GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
tension	concrete C12/15	N <sub>Rk</sub>	0.7 <sup>1</sup>	1.2	2.0
	concrete ≥ C16/20	N <sub>Rk</sub>	-	2.0	3.0
shear	zinc-plated steel	V <sub>Rk</sub>	2.4 <sup>1</sup>	4.8	6.4
	A4 stainless steel	V <sub>Rk</sub>	-	3.0	6.2

**Design resistance (kN)**

size			GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
tension	concrete C12/15	N <sub>Rd</sub>	0.39 <sup>1</sup>	0.67	1.1
	concrete ≥ C16/20	N <sub>Rd</sub>	-	1.1	1.7
shear	zinc-plated steel	V <sub>Rd</sub>	1.6 <sup>1</sup>	3.8	4.3
	A4 stainless steel	V <sub>Rd</sub>	-	1.3	2.6

**Recommended load (kN)**

size			GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
tension	concrete C12/15	N <sub>rec</sub>	0.28 <sup>1</sup>	0.48	0.79
	concrete ≥ C16/20	N <sub>rec</sub>	-	0.79	1.19
shear	zinc-plated steel	V <sub>rec</sub>	1.1 <sup>1</sup>	2.7	3.1
	A4 stainless steel	V <sub>rec</sub>	-	0.9	1.9

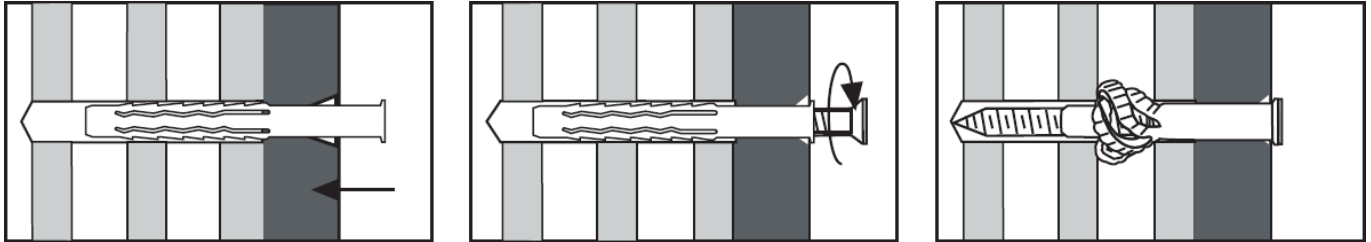
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1 kN ≈ 100 kg  
steel failure

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- **Use on masonry**

**Installation**

**Base material**

		type (acc. to EN 771-1)	min. density $\rho$ (kg/dm <sup>3</sup> )	min. compr. strength $f_b$ (N/mm <sup>2</sup> )	drill method
solid brick	clay	-	2.1	20	hammer
	calcium silicate	-	1.9	30	hammer
hollow brick	clay	Optibric PV	0.60	7.5	rotary
vertically perforated brick	clay	doppio UNI	0.91	15	hammer
	clay	HLZ 12	0.90	12	hammer
	calcium silicate	KSL-R 8DF	1.3	15	hammer

**Setting parameters**

size			GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
hole diameter		$d_0$ mm	6	8	10
hole depth		$h_1$ mm	50	80	
nominal embedment depth		$h_{nom}$ mm	40	70	
effective anchorage depth		$h_{ef}$ mm	40	70	
min. base material thickness	solid brick	$h_{min}$ mm	115		
	hollow clay brick	$h_{min}$ mm	200		
	vertically perforated clay brick	$h_{min}$ mm	115		
	vertically perforated calcium silicate brick	$h_{min}$ mm	240		
minimum edge distance		$c_{min}$ mm	100		
minimum spacing, single anchor		$s_{min}$ mm	250		
minimum spacing, anchor group, perpendicular to free edge		$s_{1,min}$ mm	200		
minimum spacing, anchor group, parallel to free edge		$s_{2,min}$ mm	400		

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**Strength data**

Resistance for loading in tension, shear or combined tension and shear, valid for a single anchor far from the edges.

**Characteristic resistance  $F_{Rk}$  (kN)**

size		GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
solid brick	clay $f_b \geq 75 \text{ N/mm}^2$	0.8	3.5	4.0
	clay $f_b \geq 20 \text{ N/mm}^2$		1.5	1.2
	calcium silicate		1.5	2.5
hollow brick	clay Optibric PV	0.2	0.3	0.5
vertically perforated brick	clay doppio UNI		0.5	0.75
	clay HLZ 12		0.5	0.9
	calcium silicate KSL-R 8DF	0.5	1.2	

**Design resistance  $F_{Rd}$  (kN)**

size		GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
solid brick	clay $f_b \geq 75 \text{ N/mm}^2$	0.32	1.4	1.6
	clay $f_b \geq 20 \text{ N/mm}^2$		0.60	0.48
	calcium silicate		0.60	1.0
hollow brick	clay Optibric PV	0.08	0.12	0.20
vertically perforated brick	clay doppio UNI		0.20	0.30
	clay HLZ 12		0.20	0.36
	calcium silicate KSL-R 8DF	0.20	0.48	

**Recommended load  $F_{rec}$  (kN)**

size		GX-L 6 <sup>1</sup>	GX-L 8	GX-L 10
solid brick	clay $f_b \geq 75 \text{ N/mm}^2$	0.23	1.0	1.1
	clay $f_b \geq 20 \text{ N/mm}^2$		0.43	0.34
	calcium silicate		0.43	0.71
hollow brick	clay Optibric PV	0.06	0.09	0.14
vertically perforated brick	clay doppio UNI		0.14	0.21
	clay HLZ 12		0.14	0.26
	calcium silicate KSL-R 8DF	0.14	0.34	

<sup>1</sup> not included in CE certification

 1 kN  $\approx$  100 kg

 Characteristic resistance  $N_{Rk}$ ,  $V_{Rk}$  and  $F_{Rk}$  derive from values certified in European Technical Assessment ETA-12/0261. Design resistances  $N_{Rd}$ ,  $V_{Rd}$  and  $F_{Rd}$  include partial safety factor on strengths. Recommended values  $N_{rec}$ ,  $V_{rec}$  and  $F_{rec}$  include the further 1.4 safety factor.

For the design of fixing with reduced spacing or near the edge, or groups of two or more fixings and for the resistance of the anchor under shear with lever arm refer to ETA-12/0261 or to Declaration of Performance DPGE1001 and use the design method outlined in Annex C of ETAG 020 (issued by EOTA).