G&B Fissaggi S.r.l. Italia

C.so Savona 22,1029 Villastellone (TO), Italia
tel. +39 011 9619433 - fax +39 011 9619382
www.gebfissaggi.com - info@gebfissaggi.com

G&B Fissaggi UK
G&B Fissaggi Vertretung Deutschland
G&B Fissaggi Ibérica
G&B Fissaggi Benelux
G&B Fissaggi France

TECHNICAL DATA SHEET

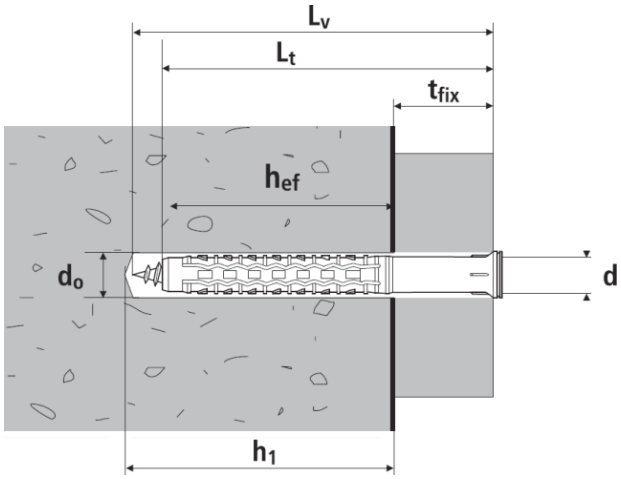
GX-L NYLON long multipurpose plastic anchor

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



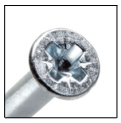
d_0 = plug diameter
d = hole diameter
L_t = plug length
h_1 = minimum hole depth
h_{nom} = nominal embedment depth
h_{ef} = effective anchorage depth
d_v = screw diameter
L_v = screw length
t_{fix} = fixable thickness

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

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

GX-L Nylon

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



art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v mm	drive
97099 [1]	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	

[1] not included in CE certification

GX-L Nylon
Ø8 with TORX countersunk screw
case-hardened, zinc-plated

art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v 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

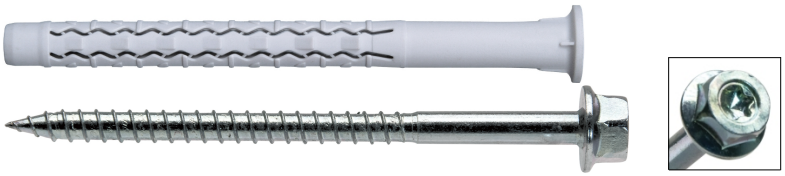
art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v mm	drive
97008	GXL1080VT	10	80	10	80	70	7	85	T40
97009	GXL10100VT		100	30				105	
97010	GXL10120VT		120	50				125	
97011	GXL10140VT		140	70				145	
97012	GXL10160VT		160	90				165	
97013	GXL10200VT		200	130				205	
97014	GXL10240VT		240	170				245	
97015	GXL10260VT		260	190				265	

GX-L Nylon
with TORX countersunk screw
stainless steel A4 (AISI 316)

art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v 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	85	T40
97017	GXL10100VTI		100	30				105	
97018	GXL10120VTI		120	50				125	
97019	GXL10140VTI		140	70				145	
97020	GXL10160VTI		260	190				265	

GX-L Nylon

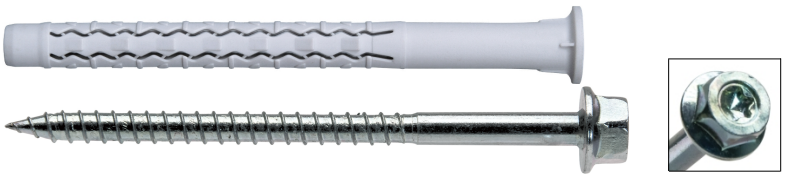
Ø10 with collar, with hexagonal TORX flanged screw class 5.8, zinc-plated,



art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v 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

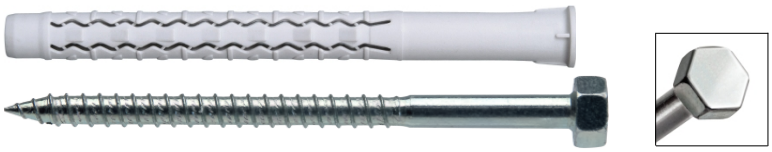
Ø10 with collar, with hexagonal TORX flanged screw stainless steel A4 (AISI 316)



art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v 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

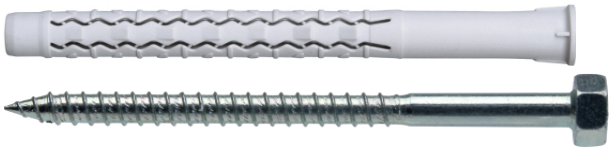
Ø8 with hexagonal screw case-hardened, zinc-plated



art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v mm	span
97126	GXL880VE	8	80	10	80	70	5.5	85	10
97127	GXL8100VE		100	30				105	
97128	GXL8120VE		120	50				125	

GX-L Nylon

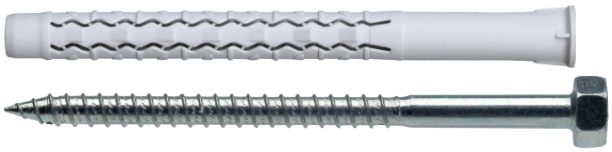
Ø10 with hexagonal screw
class 5.8, zinc-plated



art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v mm	span
97022	GXL1080VE	10	80	10	80	70	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

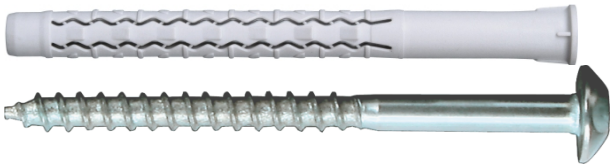
Ø10 with hexagonal screw
stainless steel A4 (AISI 316)

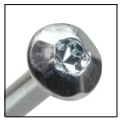


art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v mm	span
97118	GXL1080VEI	10	80	10	80	70	7	85	13
97119	GXL10100VEI		100	30				105	
97120	GXL10120VEI		120	50				125	

GX-L Nylon

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





art.	descr.	d mm	L_t mm	t_{fix} mm	h_1 mm	h_{ef} mm	d_v mm	L_v mm	drive	Ø head mm
97089 [1]	GXL1080VA	10	80	10	80	70	7	85	T40	16.5
97090 [1]	GXL10100VA		100	30				105		
97091 [1]	GXL10120VA		120	50				125		
97092 [1]	GXL10140VA		140	70				145		
97093 [1]	GXL10160VA		160	90				165		

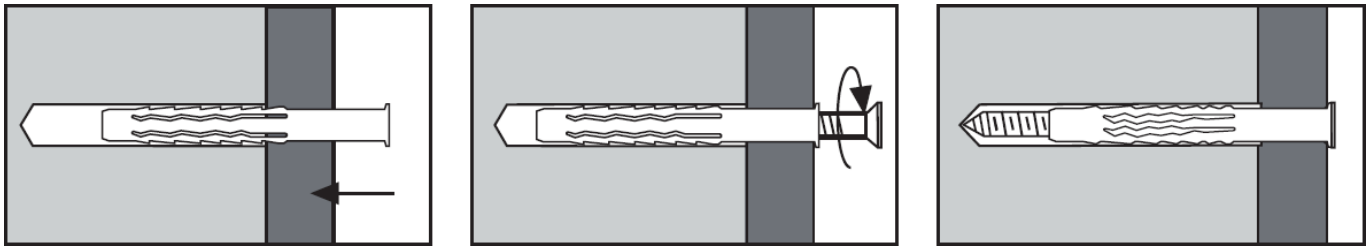
[1] not included in CE certification

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	-

- **Use on concrete**

Installation



Setting parameters

size		**GX-L 6** [1]	**GX-L 8**		**GX-L 10**	
base material		**concrete**	**concrete C12/15**	**concrete ≥ C16/20**	**concrete C12/15**	**concrete ≥ C16/20**
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	h_{min} mm	70	100			
critical edge distance	c_{cr} mm	100	100	70	140	100
minimum edge distance	c_{min} mm	70	70	50	70	50
minimum spacing	s_{min} mm	70	70	50	85	60
tightening torque	T_{inst} Nm	2	8		16.5	

[1] 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** [1]	**GX-L 8**	**GX-L 10**
tension	concrete C12/15	N_{Rk}	0.7 [1]	1.2	2.0
	concrete ≥ C16/20	N_{Rk}	-	2.0	3.0
shear	zinc-plated steel	V_{Rk}	2.4 [1]	4.8	6.4
	A4 stainless steel	V_{Rk}	-	3.0	6.2

Design resistance (kN)

size			**GX-L 6** [1]	**GX-L 8**	**GX-L 10**
tension	concrete C12/15	N_{Rd}	0.39 [1]	0.67	1.1
	concrete ≥ C16/20	N_{Rd}	-	1.1	1.7
shear	zinc-plated steel	V_{Rd}	1.6 [1]	3.8	4.3
	A4 stainless steel	V_{Rd}	-	1.3	2.6

Recommended load (kN)

size			**GX-L 6** [1]	**GX-L 8**	**GX-L 10**
tension	concrete C12/15	N_{rec}	0.28 [1]	0.48	0.79
	concrete ≥ C16/20	N_{rec}	-	0.79	1.19
shear	zinc-plated steel	V_{rec}	1.1 [1]	2.7	3.1
	A4 stainless steel	V_{rec}	-	0.9	1.9

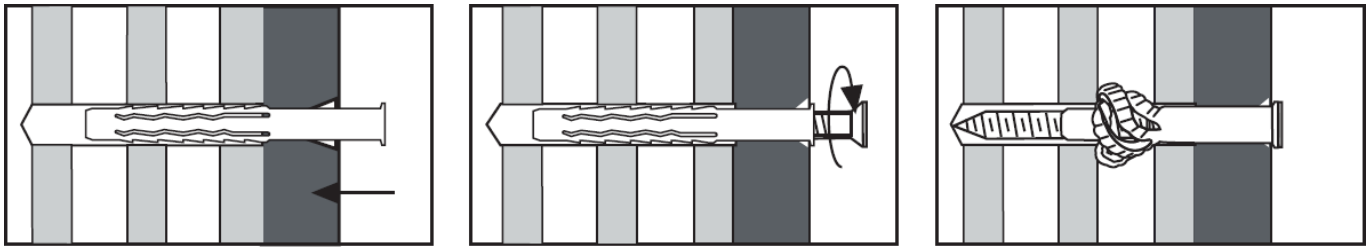
[1] not included in CE certification

1 kN ≈ 100 kg

steel failure

- **Use on masonry**

Installation



Base material

		type (acc. to EN 771-1)	min. density ρ (kg/dm³)	min. compr. strength f_b (N/mm²)	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 [1]	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		

[1] not included in CE certification

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** [1]	**GX-L 8**	**GX-L 10**
solid brick	clay $f_b \geq 75$ N/mm^2	0.8	3.5	4.0
	clay $f_b \geq 20$ 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** [1]	**GX-L 8**	**GX-L 10**
solid brick	clay $f_b \geq 75$ N/mm^2	0.32	1.4	1.6
	clay $f_b \geq 20$ 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** [1]	**GX-L 8**	**GX-L 10**
solid brick	clay $f_b \geq 75$ N/mm^2	0.23	1.0	1.1
	clay $f_b \geq 20$ 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

[1] not included in CE certification

1 kN ≈ 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 DPGEB1001 and use the design method outlined in *Annex C* of ETAG 020 (issued by EOTA).