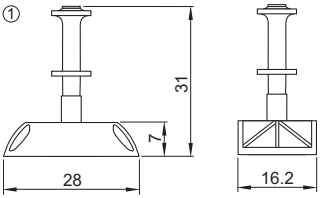
X-ET for Fastening Plastic Electrical Cable Trays and Junction Boxes

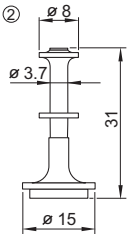
Product data

Dimensions

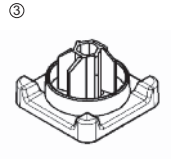
X-ET UK-H27



UK-H27

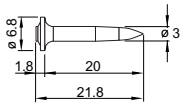


X-ET MX

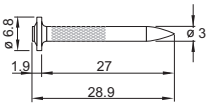


w x l x h = 16.5 x 16.5 x 12 mm

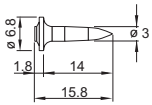
X-GHP 20



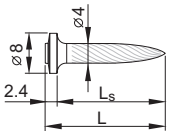
X-GN 27



X-EGN 14



X-U 16/22/27



General information

Material specifications

X-ET		Polyethylene
X-ET MX		Polyamide (halogen and silicon free), light grey RAL 7035 and PBT (silicon-free, flame retardant), stone grey RAL 7030
Nails:		
Carbon steel	HRC 58	**X-GHP 20, X-EGN 14**
	HRC 53.5	**X-GN 27**
	HRC 58	**X-U 16 / 22/ 27**
Zink-coating	2–8 µm	**X-GHP 20, X-EGN 14, X-GN 27**
	5–13 µm	**X-U**

Fastening tools

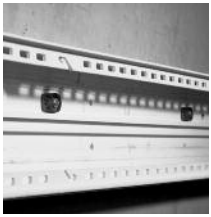
DX 460-MX, DX 351-MX, GX 120-ME, GX 100-E

See fastener selection for more details.

Applications

Examples

Cable trunking



Cable trunking

Junction boxes

Conduits & pipes with metal or textile band

Load data

Design data

Recommended load

Fastener	Service load [1] [kN]
X-ET	0.1

[1]) The recommended service load is controlled by serviceability of the plastic part.

Test data (Examples)

Important note: test data are for information only.

Load capacity of the nails:

The nail resistance is not controlling the failure of the fastener.

Fastenings to concrete

Nail	Average tensile failure load $N_{u,m}$ [kN]	Scatter [%]	Embedment depth h_{ET} [mm]	Concrete strength f_{cc} [N/mm²]
X-GHP 20 MX	1.61	52.0	14.0	52.2
X-GN 27 MX	1.91	47.1	19.2	23.7
X-U 22 MX	3.18	37.8	20.1	54.7
X-U 27 MX	4.04	35.4	24.5	30.9

Application requirements

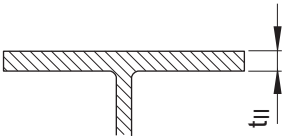
Thickness of base material

Concrete

X-U:	**h_{min} = 80 mm**
X-GHP, X-GN:	**h_{min} = 60 mm**

Steel

$t_{II} \geq$ 4 mm



Corrosion information

These zinc-coated fasteners are not suitable for long-term service outdoors or in otherwise corrosive environments.

For further detailed information on corrosion see relevant chapter in **Direct Fastening Principles and Technique** section.

Fastener selection and system recommendation

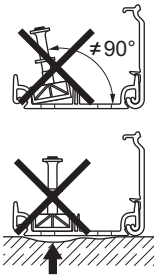
			Fastener				Tools
No.	Techno-logy	Base material	Fastener	Designation	Shank Ø d_S [mm]	Shank length L_S [mm]	
①	DX	Concrete /steel	X-ET	X-ET UK-H27	3.7	27	DX 460-F8
③	DX	Concrete /stee	X-ET MX	X-U 22/27 MX	4.0	22/27	DX 460-MX, DX 351-MX
③	DX	Steel	X-ET MX	X-U 16 MX	4.0	16	DX 460-MX, DX 351-MX
③	GAS	Concrete	X-ET MX	X-GHP 20	3.0	20	GX 120-ME
③	GAS	Concrete	X-ET MX	X-GN 27	3.0	27	GX 120-ME
③	GAS	Steel	X-ET MX	X-EGN 14	3.0	14	GX 120-ME
③	GAS	Sandlime masonry	X-ET MX	All GX nails	3.0	see above	GX 120-ME

Fastener program

Fastener	Item no.	Designation
X-ET	251705	X-ET UK-H27
	285718	X-ET MX
DX Nails	237344	X-U 16 MX
	237346	X-U 22 MX
	237347	X-U 27 MX
GX nails	338872	X-EGN 14 MX
	285890	X-GHP 20 MX
	340229	X-GN 27 MX

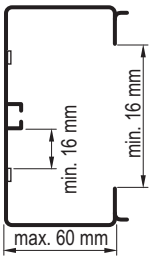
Conditions for use:

- No fastenings on ribs
- Underside of trunking must be smooth
- X-ET MX only in pre-drilled holes



Trunking dimensions:

$t_I \leq 2$ mm PVC



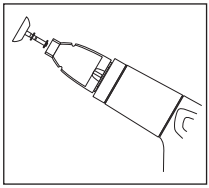
System recommendation

DX tools:	Steel:	**6.8/11M yellow or red cartridge**
	Concrete:	**6.8/11M yellow cartridge** on green/fresh and standard concrete
		6.8/11M red cartridge on precast, old and hard concrete
	Masonry:	**6.8/11M green cartridge**
GX 120-ME tool:		**Gas can GC 21** (GC 22 in USA)
GX 100-E tool:		**Gas can GC 11** (GC 12 in USA)

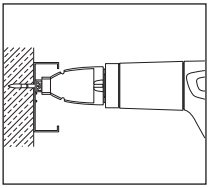
Tool energy adjustment by setting tests on site.

Fastening quality assurance

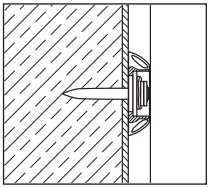
Installation



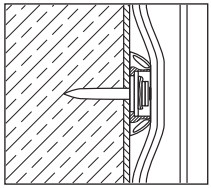
1.
Load X-ET in the tool.



2.
Apply X-ET to surface with tool, compress the tool and pull the trigger.



3.
Nailheads should be below top of X-ET



4.
Cables can be laid right over the fastenings

Spacing:

- 50–100 cm along the trunking
- Adjust spacing as needed to achieve stability of trunking