

Universal hammer driven fastener with metal pin and short expansion zone

LMX-10

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Fastener for fastening of polystyrene EPS foam and mineral wool MW (in combination with TDX support collar) on all substrates according to EAD 330196-01-0604, in ETICS systems.



ETA-16/0509



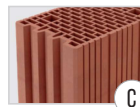
SUBSTRATES (EAD 330196-01-0604 ABCDE)



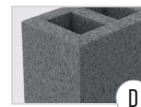
Concrete



Solid clay bricks
MZ, Calcium silicate solid brick KS



Hollow bricks



Elements on LAC
lightweight aggregate concrete



Autoclaved aerated concrete AAC

FASTENER MATERIAL	Polyethylene (PE)
PIN MATERIAL	Carbon steel
HEAD MATERIAL	Polyamide (PA)
INSTALLATION METHOD	<ul style="list-style-type: none"> · Surface mount · Immersed mount
APPLICATION	Universal fastener for fastening polystyrene EPS and mineral wool MW
TYPE OF INSULATION MATERIAL	<ul style="list-style-type: none"> · Styrofoam EPS · Styrofoam XPS · Mineral wool MW



NEW IMPROVED DESIGN EMBEDMENT OF 30 AND 50 mm

Owing to the new design of the expansion zone the fastener can be installed in all substrate categories while maintaining its high strength parameters.



METAL PIN'S HEAD SEALED IN PLASTIC

Reduced point thermal transmittance enhances the heat transfer coefficient of the whole barrier, and additionally protects the pin against corrosion.



INNOVATIVE DESIGN OF THE FASTENER

Large amount of pocket adhesives on the collar increases the adhesiveness of the mortar. Greater stiffness of the collar means better holding of the thermal insulation material



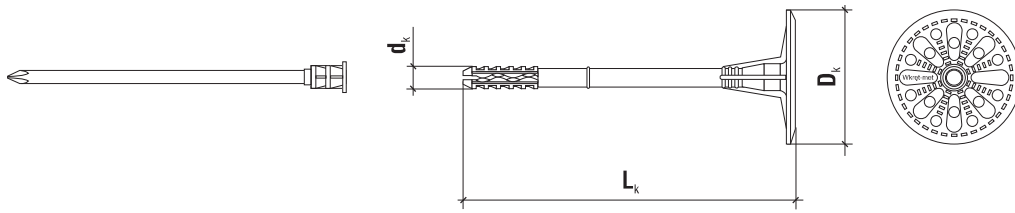
SHORT EXPANSION ZONE, 10 mm DIAMETER

Less drilling required – time and work saving solution.

Metal pin + head covered with plastic PA

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LMX-10
Length range: 70 - 260 mm

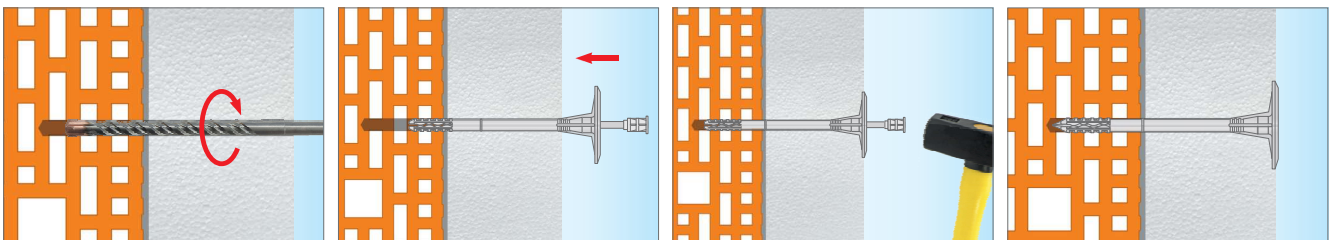


Product code	Dimensions	Insulation material thickness t_{fix} [mm]				Pack unit [pcs.]	
		New buildings		Old buildings			
		t_{tot} adhesive layer of 10 mm		t_{tot} adhesive layer of 10 mm + 20 mm of old plaster			
		without cutter	with cutter	without cutter	with cutter		
LMX-10							
ø10	LMX10070(200)	10x70	30/10*	50/30*	10/-*	30/10*	200
	LMX10090(200)	10x90	50/30*	70/50*	30/10*	50/30*	200
	LMX10110(200)	10x110	70/50*	90/70*	50/30*	70/50*	200
	LMX10120(200)	10x120	80/60*	100/80*	60/40*	80/60*	200
	LMX10140(200)	10x140	100/80*	120/100*	80/60*	100/80*	200
	LMX10160(200)	10x160	120/100*	140/120*	100/80*	120/100*	200
	LMX10180(200)	10x180	140/120*	160/140*	120/100*	140/120*	200
	LMX10200(200)	10x200	160/140*	180/160*	140/120*	160/140*	200
	LMX10220(100)	10x220	180/160*	200/180*	160/140*	180/160*	100
	LMX10240(100)	10 x 240	200/180*	220/200*	180/160*	200/180*	100
	LMX10260(100)	10x260	220/200*	240/220*	200/180*	220/200*	100

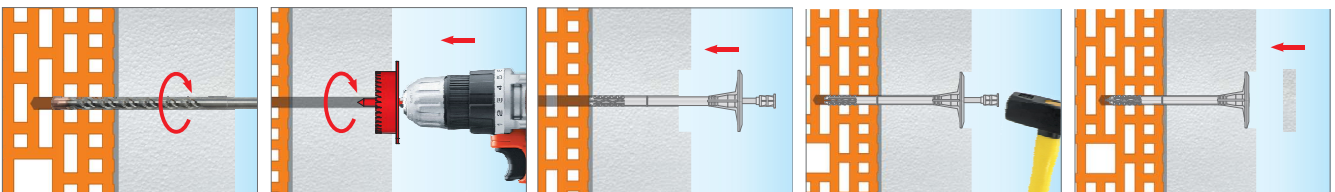
* - for substrate use category E (Autoclaved aerated concrete)

Product marking - LMX10070(200)			
LMX	10	070	(200)
Fastener type	Diameter	Length	Number of pieces in a box

INSTALLATION INSTRUCTIONS - surface mount



INSTALLATION INSTRUCTIONS - immersed mount with a polystyrene EPS disc (with plastic cutter)



AVAILABLE ACCESSORIES

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LMX-10 - TECHNICAL DATA

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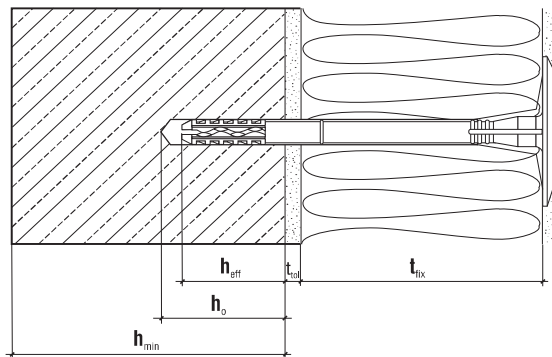


ETA-16/0509

TECHNICAL PARAMETERS

Parameter	Unit	Value	
Fastener diameter	d_k [mm]	10	
Collar diameter	D_k [mm]	60	
Effective anchorage depth	h_{eff} [mm]	30/50*	
Hole depth	h_o [mm]	40/60*	
Point thermal transmittance	χ [W/K]	surface mount	Immerged mount
		0,004	0,002
Collar stiffness	S [kN/mm]	0,50	
Substrate category	-	A B C D E	
Fastener material	-	PE	
Pin material	-	Carbon steel, head covered with plastic PA	
European Technical Assessment	-	ETA-16/0509	

* - for substrate use category E (Autoclaved aerated concrete)



LOAD RESISTANCE

EAD 330196-01-0604 use cat.	Substrate	Density [kg/dm ³]	Characteristic pull-out resistance [kN]
A	Concrete C12/15	≥ 2,25	0,75
A	Concrete C20/25 - C50/60	≥ 2,30	0,90
B	Solid clay bricks	≥ 2,00	0,90
B	Calcium silicate solid brick	≥ 2,00	0,90
C	Calcium silicate hollow blocks	≥ 1,60	0,90
C	Vertically perforated clay bricks	≥ 1,20	0,90
C	Porotherm 25	≥ 0,80	0,50
D	LAC lightweight aggregate concrete	≥ 0,88	0,90
E	Autoclaved aerated concrete AAC 2	≥ 0,35	0,75
E	Autoclaved aerated concrete AAC 7	≥ 0,65	0,90

INSTALLATION DATA

Fastener type	LMX 10
Min. substrate thickness h_{min} [mm]	100
Minimum fastener spacing L_{os} [mm]	100
Minimum edge distance C_{min} [mm]	100

Partial safety factor for fastener resistance $\gamma_m = 2,0$ (valid in absence of national regulations)

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LMX-10 - INSTALLATION ACCESSORIES

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Plastic cutter for polystyrene EPS

WK-FT

dimensions Ø66.7 mm

Specifications:

- Plastic cutter for cutting holes in polystyrene EPS insulation material for insertion of polystyrene EPS disc.
- Controlled cutting depth, thrust collar with a diameter of 90 mm.



Metal cutter for mineral wool

WK-FM

diameter Ø64 mm

Specifications:

- Metal cutter for drilling of holes in mineral wool for immersed mount of fasteners.
- Controlled cutting depth, support collar of 95 mm in diameter.



Polystyrene disc (white, graphite)

KS, KSG

dimensions Ø67 x 17 mm

Specifications:

- Polystyrene disc (white, graphite) for covering up work holes in polystyrene - installation immersed mount.



Mineral wool disc

EDMW

wymiary Ø67 x 17 mm

Specifications:

- Mineral wool disc, density 130 kg/m³.



Additional collar

TDX-90, TDX-140

diameters Ø90 mm, Ø140 mm

Specifications:

- Additional collar with diameter of 90 mm for final securing touches in installation of mineral wool MW (including Lamella) - Fibreglass reinforced plastic.
- Additional collar with diameter of 140 mm for final securing touches in installation of mineral wool MW (including Lamella) - Fibreglass reinforced plastic.

