

Section 1. PRODUCT DESCRIPTION

PLASTIC SLEEVE FOR FIXING OF FLAT ROOF THERMAL INSULATION AND WATERPROOFING SYSTEMS – LINO 15

Plastic sleeve LINO 15 for fixing of flat roof thermal insulation and waterproofing systems with use of telescopic connections to be used with self-tapping screws type WBSW-6,3xL. The sleeve is made of the top-quality polypropylene. Telescopic design prevents damage to waterproofing systems; special protrusions on the inside of the sleeve prevent the screw from popping up. Recommended for thermal insulation materials:



polystyrene

mineral wool

PIR foam

PUR foam

Types of substrates on which sleeve LINO 15 can be installed according to EAD 030351-00-0402:

- concrete C12/15, concrete C20/25, thin-wall concrete panel
- timber C24, OSB board, plywood

Fasteners hold European Technical Assessment: ETA-15/0578



Teleskopik design



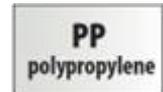
Special protrusions



Product designation



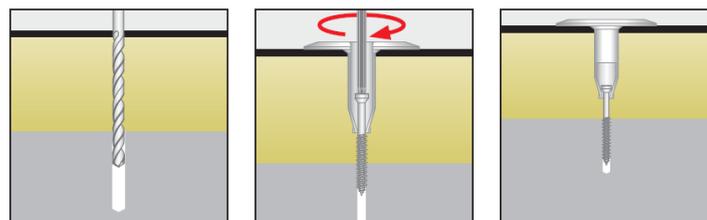
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Section 2. METHOD OF INSTALLATION

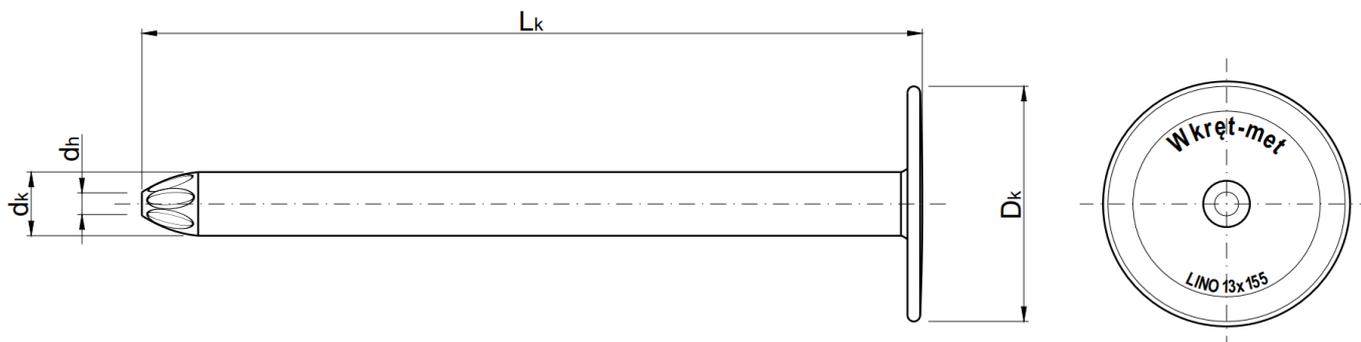
1. Before installation identify the substrate (steel sheet, concrete, timber substrate), and its thickness and select suitable fasteners. Pay particular attention to select suitable fastener type for renovation of flat roofs on a concrete substrate (in special cases perform fastener pull-out resistance tests).
2. Identify thermal insulation thickness and type (mineral wool, polystyrene, PIR foam, PUR foam, EPS roofing membrane).
3. Identify waterproofing material type and width (1.0; 1.5; 2.0; 2.5 rm.)
4. Based on items 1-3 select adequate length of plastic sleeve – by min. 15mm shorter than thermal insulation thickness
5. Due to telescopic connection of the screw, effective width of plastic sleeve is: $L_{\text{sleeve}} - 15\text{mm}$
6. Select adequate length of a screw according to a substrate, so that its effective depth of anchorage conforms with European Technical Assessment and relevant Product Data Sheet
7. It is recommended to keep the distance of support washer of the sleeve or KD steel washers of min. 10mm from the edge of the waterproofing (on the overlap, for oval washers in parallel with the longer side to the waterproofing edge)
8. Once plastic sleeve is combined with an suitable screw, the fastener should be screwed in the substrate using dedicated driver bits
9. After installation, roof fastener should maintain an effective pressure on the waterproofing and thermal insulation systems, and the support washer of the plastic sleeve should prevent rotation about steel fastener axis
10. Number of fasteners per 1m^2 should be defined in the facility technical design – the design should include division of a flat roof into individual wind zones (corner, outer side, inner side, central)

Example installation: concrete substrate – telescopic connection



PRODUCT DATA SHEET – LINO 15

Section 3. TECHNICAL DATA



TECHNICAL PARAMETERS		
Parameter	Unit	Value
Sleeve diameter	d_k [mm]	15
Hole in the sleeve	d_h [mm]	6.3
Collar of the sleeve	D_k [mm]	50
Sleeve material	[-]	PP - polypropylene
European Technical Assessment	[-]	ETA-15/0578

SELECTION TABLE			
Product code	Sleeve dimensions ($d_k \times L_k$)	Min. thermal insulation thickness [mm]	Number of pieces in a box
LINO15035PP	15x35	50	200
LINO15055PP	15x55	70	200
LINO15085PP	15x85	100	200
LINO15105PP	15x105	120	200
LINO15135PP	15x135	150	200
LINO15155PP	15x155	170	200
LINO15185PP	15x185	200	200
LINO15235PP	15x235	250	100
LINO15285PP	15x285	300	100
LINO15335PP	15x335	490	100
LINO15385PP	15x385	500	100
LINO15435PP	15x435	550	100

Section 4. REMARKS

1. All previous versions of this Product Data Sheet shall cease to be valid
2. Data given in this Product Data Sheet is in accordance with current knowledge and published in good faith. KLIMAS Sp. z o.o. is not responsible for correctness and quality of the fixing if recommendations regarding method of use and installation are not followed.