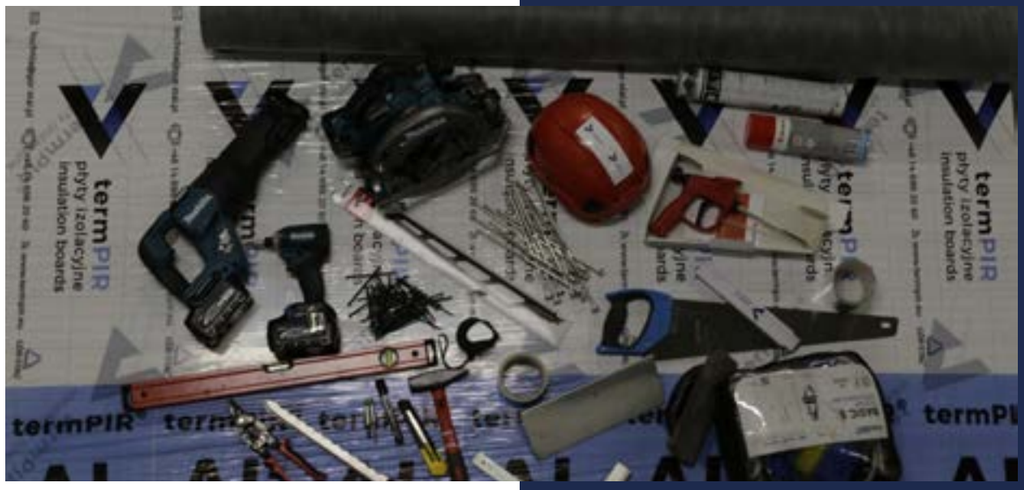
termPIR®
insulation boards

Insulation boards from Gór-Stal

termPIR® INSULATION BOARDS

BOARDS INSTALLATION INSTRUCTIONS FOR A SLOPING ROOF IN AN OVER-RAFTER SYSTEM

(variant II)



Instructions for a sloping roof in an over-rafter system

MATERIALS AND TOOLS NEEDED FOR INSTALLATION:

- termPIR® AL, MAX 19 AL, WS insulation boards;
- System aluminium tape;
- Builder's square for 67° angle, 1 piece;
- Long and short wood screws;
- Low pressure polyurethane foam;
- Battens and counter battens, planks;
- Electric screwdriver;
- Fine-toothed saw;
- Knife;
- Screws ⌀ 8 mm

TRANSPORT AND STORAGE OF termPIR® INSULATION BOARDS

During transport and unloading of termPIR® insulation boards ensure that panel edges (interlocking joints) are protected so that the edges are not damaged while being lifted and stored (Photo 02).
Lift the boards using special lifting straps or carry them manually one at a time (Photo 03)

Photo 02

Photo 03

For detailed information on transporting and storing our insulation boards please go to www.termpir.eu

Important:
Any mechanical damage to the edges, or panel soiling (caused by storing directly on the ground) may affect insulation integrity.

STAGE I: PREPARING SURFACES FOR THE INSTALLATION OF termPIR® INSULATION BOARDS

In the termPIR® over-rafter system no full boarding is required, however, for economic and aesthetic reasons it is recommended to give such installation prior consideration (Photo 04). On sloping surfaces made from polished planks or boards it is possible to lay plastic vapour barrier as additional protection, after which insulation boards can be installed. The final decision obviously rests with the project owner.

Photo 04

Photo 05. Roof view from inside without full boarding
This requires finishing with, for example, dry plaster.

STAGE II: termPIR® INSULATION BOARDS INSTALLATION

First, cut and align rafters and properly install a butt plank (Photos 06 -07). The first row of termPIR® insulation boards should be installed starting from an eaves board or an additional beam installed on the rafters below the facade wall and roof plane joint (Photo 08).

Photo 06

Photo 07

Photo 08

Any height differences on the rafters should be compensated using wooden components which should be aligned with insulation level. (Photo 09). Install boards along a horizontal line from one side of the roof to the other, securing them with short counter battens as you go. Fix the counter battens in a staggered manner (at angles of 90˚ and 67˚) with system screws, included in the manufacturer's product offering (Photo 10)

Photo 09

Photo 10

Cut the boards to appropriate length to align with the edge of the roof, using a wood saw and, if necessary, smooth the surface using an abrasive float with sandpaper (Photos 11-16). All gaps in excess of ca. 3 mm appearing along of the board joints as well as joints between individual sloping roof surfaces (eg ridge line, rood ridges, valleys, etc.)should be insulated with low pressure polyurethane foam.

Photo 11

Photo 12

Photo 13

Photo 14

Photo 15

Photo 16

After cutting and smoothing the board surface, apply self-adhesive aluminum tape to the insulated gaps (Photos 18-20). In order to achieve better adhesion of the tape to be applied, prior to application remove dust from the surface and dry it (Photo 17). While pressing the system tape to the board facing, first cover the horizontal gap between the boards and then the vertical one.

Photo 17

Photo 18

Photo 19

Photo 20

The first row of screws should be installed through the counter battens to reach the rafters, starting from the bottom edge of the boards, at a distance of ca. 15 cm. The second row of screws should be driven through the counter battens and the insulation boards to reach the rafter at an angle of 67° relative to the roof plane, at a distance of ca. 40 cm from the first row. Use a system builder's square to ensure the angle is correct, which will facilitate easy and fast installation (Photos 21-22). After you have installed the first belt of termPIR® boards, go on to installing the subsequent layer of boards in a staggered pattern, i.e. offset relative to the adjoining board row. Wheninstalling the subsequent rows, use the leftover pieces of insulation panels that were cut off before and start installation using such cut-offs (Photo 23). After you have installed next two horizontal rows of boards, roll out vapour permeable barrier and fasten it using staples (Photo 24). Now start installing the second layer of counter battens, fixing them with screws to the underlying layer. This time use the shorter screws for wood (Photo 25). Now attach battens transversely to such a structure, spaced apart by the distance as required for given roofing, according to the manufacturer's guidelines (Photos 26 -27). All of the operations involved in the installation of structural components should be carried out in accordance with the design and good roofing practice

Photo 21

Photo 22

Photo 23

Photo 24

Photo 25

Photo 26

Photo 27

Photo 28

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RECOMMENDATIONS

Given the large size and low weight of termPIR® insulation boards, work at height should be carried out in favourable weather conditions (wind gusts).

In order to seal wider gaps between the panels use wider aluminium tape which will facilitate installation and reduce tape usage. In order to achieve better building insulation, the gaps can be additionally protected from inside with aluminium tape (Photos 29 - 30).

Photo 29

Photo 30

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GÓR-STAL®
SANDWICH PANELS

CONTACT

Insulation Board Factory
ul. Adolfa Mitery 9, 32-700 Bochnia, Poland
tel./fax: +48 14 698 20 60
e-mail: bochnia@gor-stal.pl, www.termpir.eu