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INSTALLATION INSTRUCTION NO. 11, FOR APPLICATION OF VAPOUR PERMEABLE MEMBRANES AS INITIAL COVERING MEMBRANE IN VENTILATED ROOFS (IN RESIDENTIAL ATTICS WITH TWO VENTILATION GAPS)

This instruction concerns the most important regulations for application of vapour-permeable membranes, further referred to as „ICM” with DoP type 120 – type 265 in function of an initial covering layer (sealing roof coverings laid on battens and counter-battens) in ventilated roofs.

1. ICM can be applied as a sealing layer (initial covering layer) for coverings of sloping roofs with slope ≥ 20 º ( ≥ 36,4 %) laid on battens and counter-battens, in ventilated roofs with residential (pic. 1) or non-residential (pic. 2) attics. Because of that, the construction of the roof eaves where ICM is installed should enable draining the condensate and leakages out of the roof (pic. 3).
2. Rys. MWK - FWK 1 c-b.tifNo matter of the attic’s destination, both ventilation gaps or spaces (pic. 1-3) made by ICM between the covering and thermal insulation must have inlet and outlet and must be permeable on its whole length. Inlets and outlets should be protected from animals and height of the inlets, outlets and the gaps should be adjusted to the size of the roof – according to Instruction no. 2.
3. On the roofs with unused attics (pic. 2), ICM is laid on roof truss in the same manner as on the sloping roofs as a sealing layer laid on battens and counter-battens in non-ventilated roofs (according to Instruction no. 1).
4. On the roofs with residential attic (pic. 1), ICM is laid on roof truss similar to the way described in Instruction no. 1, but there is an additional need to leave an outlet for ventilating air flowing in the lower gap in ridge and in the corners (no. 2 in the pictures). In the ridges, a dilatation between the edge of the last strip of ICM and ridge should be left. To ensure correct functioning of the ventilation gap, this dilatation should have 5 cm. To protect from precipitation blown by strong wind under the sealings of the ridges, it is advised to fix the cover of the ridge on counter-battens over this dilatation (pic. 4). This cover can be made of ICM or thin metal sheet.
5. Rys. MWK - FWK 2 c-b.tifRys. MWK - FWK 3 c-b.tifIn corners, this dilatation should be made by folding ICM on battens parallel to the corner line. Those battens should be fixed so that they create an outlet for ventilating air, meeting the requirements from Instruction no. 2.
6. Lower ventilation gap between ICM and thermal insulation should be made by means of spacer laths (pic. 5). The height of the lath is at the same time the height of the gap and should be adjusted according to its length and other roof conditions according to the regulations of creating ventilation of sloping roofs – according to Instruction no. 2 or DIN 4108 – 3.
7. In front of any obstacle which closes this gap, there is a need to construct an outlet (pic. 5) and inlet to the gap behind it, so that it is permeable on its whole length. It is advised to make those holes in ICM or use the overlaps between its strips by inserting expanding ventilation elements. If the width of the obstacle is smaller than ¾ of the distance between the rafters and airflow is possible next to the obstacle, cutting out the holes is not necessary.
8. **rys. 5 - 11 c-b.tifrys. 4 - 11.tif** ICM should be installed thinner nonwoven inside and thicker (with overprint) outside the roof. The most efficient way of installation of ICM is to start from the eaves with strips parallel to the eaves with overlaps, whose size depends on the sloping angle of the roof (table in the Instruction added to every roll).
9. Around chimneys, hatches, roof windows and on all connections with elements going through ICM, it is advised to tape it by means of self-adhesive tapes intended for this purpose (e.g. MARMA K1, N2, W1 etc.) or glues intended for this purpose, so its fragments are curled up.
10. All remarks and reservations enumerated in instruction no. 1 are also binding for application of ICM in ventilated roofs, covered by this instruction



**Instruction written according to the state of knowledge from May 2019.**

Additional information on websites:

[www.marma.com.pl](http://www.marma.com.pl) and [www.dachowa.com.pl](http://www.dachowa.com.pl) .