Durable, energy efficient roofing system with guaranteed high performance
From its Belgian base, Atab has grown from being the Benelux market leader into an international company in the waterproofing sector.

With almost 100 years manufacturing experience, Atab has unrivalled specialised technical know-how in the roofing and waterproofing sector. It is the established expert for consultation and the production of tried and tested, sustainable waterproofing systems, incorporating high performance thermal insulation and the latest energy-saving technologies. From the beginning of 2000, Atab has been the European headquarters and Centre of Excellence for the IKO Group.

Atab’s distinguishing features:
- 100 years experience in waterproofing expertise in roof waterproofing materials expertise in liquid products expertise in highly efficient PIR insulation expertise in PV solar systems expertise in civil engineering expertise in implementation

Atab within the IKO group
- Centre of Excellence and European headquarters within the International IKO group.

With more than 30 factories worldwide, IKO is a global player and a leading manufacturer of roofing materials, insulation materials and waterproofing solutions. In addition, IKO has a number of years of experience and technical expertise with ‘ECO’ products, including Spectraplan TPE roofing sheets, ‘solvent-free’ liquid waterproofing products and repair products for the road construction sector based on colza oils.

IKO is not only aware of the global environmental problems, but takes its responsibilities seriously in this area by developing innovative products for the construction sector.

Our objective and mission is to develop low-energy, environment-friendly roofing systems that enable our customers to economically comply with the increasingly strict performance requirements on buildings.
Roofs play a crucial role in the energy management of buildings. Extensive roof surfaces must not only be durably waterproof, but must also offer the building owner a wide range of options relating to energy saving and energy generation.

The added value of such roofs is achieved through the use of highly durable roof waterproofing systems (with or without heat-reflecting properties), working in harmony with thermally efficient insulation, rainwater harvesting, eco-friendly green roofs or the generation of private energy via the installation of photovoltaic systems.

**IKO solar generates green energy free-of-charge.**

The increasing scarcity of traditional energy reserves, together with mounting energy costs and the growing awareness surrounding the environment compels us to look for alternative sources of energy. The most obvious source in this context is inexhaustible solar energy. Atab’s lightweight solar modules are among the most efficient systems for converting solar energy into usable electricity.

Following the Kyoto agreements, the government has made important decisions with regard to the reduction of greenhouse gases. Two of these involve the provision of direct support for investment in a power-generating roof: grants for insulation and green current certificates. For this reason, the installation of IKO solar modules, whether in combination with IKO enertherm high performance insulation or not, is a particularly attractive investment.

**IKO solar and IKO enertherm enable you to make your investment pay off by making immediate use of government subsidies.**

By investing in green energy and by taking measures to avoid wasting energy and water, you will set an important example to both your personnel and the community in which you operate, indicating that social responsibility and corporate identity are not simply hollow concepts.

**Your company’s social commitment is highlighted with IKO solar.**
The energy roof: High efficiency roofing system with IKO solar PV modules

The energy roof not only consists of waterproof roofing membranes. This is just one of a number of components which must work alongside each other and in harmony with the building itself, its function, the required energy efficiency, the roof structure, the installation method and the operating life of the roof, as well as any secondary requirements such as fire integrity or reflective capacity. The installation of energy-saving and energy-generating systems creates an additional dimension. The roof becomes an energy roof.

IKO solar photovoltaic light modules
IKO solar is a so-called thin film module comprising of amorphous silicone (a-Si) in the shape of a flexible strip that is glued horizontally onto the roofing membrane. The energy roof generates green electricity free-of-charge.

What is photovoltaic energy?

Solar energy
- Thermal energy
- Light energy
  - PV system: conversion of light particles (photons) in electrical power
- Heating systems
- Power systems

IKO reflect: Heat-reflecting white roofing membranes that reflect heat radiation
As a result of this reflection, the temperature of the roof surface will be lower, thereby increasing the output and operating life of your investment as a result of a decrease in temperature fluctuations. The white top layer generates an additional light halo above the solar modules, which makes them even more efficient. The white PU coating permits the use of rain water for sanitary purposes and garden irrigation. The installation of IKO reflect roofing membranes is completely flame-free, and the system complies with the European standard and the Broof (t1) fire test with regard to resistance to spreading fire. The energy roof has an extremely durable high-tech top layer.

IKO enertherm high-efficiency PIR insulation
With a lambda value of up to 0.023 W/mK, enertherm stands out from other insulation materials because PIR provides better insulation! In fact, you gain a higher output with a thinner, and therefore lighter, board. Enertherm does not melt and constitutes a fire-resisting insulation. The light yet highly compression-resistant board provides the roof with additional rigidity and accessibility. Regular inspections and maintenance work on the roof can therefore be carried out safely. The energy roof is extremely energy efficient.
IKO solar advantages

1. **IKO solar is a ‘lightweight’ system.**

   Thanks to a weight of only 3.5 kg/m², IKO solar modules can be fitted to all types of roofs. They are extremely suitable for light steel roof constructions, large span areas and renovations. The low weight of the IKO solar modules allows for simple integration without requiring considerable modifications to either the roof construction or to the building itself.

2. **IKO solar guarantees a highly efficient production of electricity.**

   The triple-junction technology that enables the modules to capture the red, green and blue light spectra makes the collection of both direct sunlight and diffuse light possible. This results in a better output where there is weaker light incidence, shading, clouding or soiling, or if the positioning of the modules is not quite ideal. As a result of the finely-meshed structure of the ‘bypass’ diodes, no current interruptions will occur if an individual cell breaks down.

3. **IKO solar does not damage your roof.**

   The flexible, lightweight IKO solar modules are installed by Atab-certified roofers. Our unique approach with respect to the roof membrane and our extensive waterproofing know-how guarantees the long operating life of your investment. No roof perforations or heavy ballast systems are required for the installation of IKO solar modules.

4. **IKO solar modules form a protective armour for the roof membrane.**

   The self-cleaning IKO solar modules are all-weather resistant and dirt-repellant, making them suitable for grey water recuperation for sanitary purposes and garden irrigation. The durable, transparent polymer layer contributes directly to the fire resistance of the roof, and also provides additional protection against mechanical damage to the roof covering (e.g. hail).

5. **IKO solar modules are glued flat onto the roof covering.**

   They integrate discreetly with the building and the environment. The architectural appearance of the building does not change, and there is no need for an additional building permit. As the IKO solar modules are installed flat onto the roof sheeting, they will not catch the wind. This is an important advantage for high buildings, or for roofs situated in coastal areas. The effective PV module area is also considerably higher, as no areas are shaded by vertical panels. A maximum Wp is therefore attained in this way.
Roof Engineering: phased plan

Phase 1
A. Preliminary study of the energy household.
B. Audit of the physical construction features of the building and, more specifically, the roof. Existing roofs will be thoroughly inspected. A roof assessment is an essential component of the audit.

Atab approaches every project from the perspective of a sound, waterproof roof foundation. This is necessary in order to be able to guarantee a solid basis for your investment.

Phase 2
You will receive a complete file with specifications, layout plan and output calculations.
The Atab roof engineering team will supervise the project and manage the file.

Atab carries the full responsibility for every product, and thereby for the complete roofing system. All the elements that make up the roofing system are seamlessly integrated, and you will only need a single contact person for the entire roofing package.

Phase 3
A. Guarantee for the installation of the roof waterproofing system. It is always essential to consult a roof specialist when carrying out work on the roof. The installation is carried out by authorised roofers. The roof expert is the one person who has an overview of the complexity of the waterproofing and the installation of the insulation, and his expertise will minimise the risk of damaging the roof. The site follow-up and site inspections offer additional security.

Atab provides a 10-year guarantee on the design, product and installation according to the AXA Int. Policy. Polygum roofing membranes boast more than 30 years of tried and tested durability.
B. Guarantee on the installation of the solar modules.
The gluing and sealing of the modules will only be carried out by trained and authorised roofers. The cable troughs are glued onto the top layer, i.e., no roof penetrations are required here either.

Atab grants a 20-year guarantee on the bonding between IKO Reflect and IKO Solar.

Phase 4
Acceptance and commissioning of the energy roof.
Finally, a specialised electrical fitter will make the necessary connections and put the system into operation.

Atab guarantees that the system will still yield a minimum of 80% of the rated output after 20 years of service.

Phase 5
Maintenance contract.
A maintenance clause is signed when the contract is concluded. The certified roofer will check the roof annually and will keep the PV installation clean.

Yield over 25 years

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Yield over 25 years

- € 100.000
- € 200.000
- € 400.000
- € 300.000
- € 200.000
- € 100.000
- € 0

- € 100.000
- € 200.000
- € 400.000
- € 300.000
- € 200.000
- € 100.000
- € 0
IKO reflect SA
Self-adhesive roofing sheet

- Increased interior thermal comfort of the building
- Increased durability of the roofing package due to the temperature reduction
- Environment-friendly and halogen-free
- Free of charge, comprehensive, insurance-backed guarantee on the design, product and implementation for the architect, building owner and roofer

IKO reflect reflection values in function of wavelength of light

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<tr>
<th>Wavelength [nm]</th>
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<th>Visible Light</th>
<th>Near Infrared Light</th>
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IKO reflect reflection values for several roofing materials

- IKO reflect: 27%
- White slate on bitumen: 34%
- Light-grey single ply: 19%
- Black EPDM: 5%

IKO reflect roof: a solid basis for your solar investment
IKO Concepts

The prevENt roof: the best of both worlds combined into 1 roofing package
www.atab.com

Heat-reflecting, energy-saving bituminous roofing sheet
www.ikoreflect.com

Liquid waterproofing
www.ikopro.com

Safety on the roof
www.ikoclip.com

The new PIR insulation
www.enertherm.eu

Mechanical fixation systems
www.ikofix.com

Green roofs
www.ikogreen.com

High performance solar roof elements
www.ikosolar.com