

Don't replace your windows!

Save energy by
insulating windows with

MISO 2000



The smart alternative



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What is MISO 2000?

The MISO 2000 system was developed in Sweden 20 years ago and is now used all over Scandinavia in houses, offices and governmental buildings with a great deal of success. This unique system bonds an additional glass to an existing window pane using a patented technique.

In fact, this process will form a conventional double glazed unit using the existing window glass at your location, just like one normally produced in a factory. (MISO 2000 is thus not a secondary glazing system in the normal sense). This makes the MISO 2000 system extremely suitable for achieving double glazing at locations where original frames cannot be replaced, such as listed buildings, or where the replacement of existing window frames is prohibitively expensive but it is still a requirement to save energy and reduce noise. This system is equally suitable for use on wooden or steel windows. The MISO 2000 system can be used for different purposes to improve the environment of a building:

Save energy / carbon reduction

Save energy by insulating windows with MISO 2000 to reduce heat loss to the outside in winter. MISO 2000 has been tested independently at Glasgow Caledonian University alongside English Heritage who were testing similar 1930's steel window frames.

The confirmed results show that the MISO 2000 system can reduce window 'U' values typically to $1.6\text{Wm}^{-2}\text{K}^{-1}$ resulting in greatly increased thermal efficiency. This compares with a 'U' value of approximately $5.8\text{Wm}^{-2}\text{K}^{-1}$ for a standard single glazed window. Save further energy by using Low E coated glass for the new window to reflect heat from the outside. In summer, about 50% of the sun's warmth can be reflected outside the building.



MISO 2000 under test in environmental chamber



Noise insulation

Since there are many different spacers (from 6mm to 24mm) it is possible to leave different voids between the two windows.

It is also possible to choose from different thicknesses of glass. All of this means the problem of external noise can be reduced dramatically.

The MISO 2000 methodology is ideal for transforming single glazing but can also be used on existing double glazing, to triple glaze and reduce noise still further and keep external noises outside. Either way, noise is dramatically reduced.



Sound insulation significantly increased



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Advantages of the MISO 2000 system

MISO 2000 offers many advantages over alternative ways to increase thermal efficiency of windows and reduce energy usage in buildings. In relative terms, it is quick to install, clean and very cost effective in comparison to changing all the windows.



- ▲ Good thermal and noise insulation, substantially lowers overall U value meaning huge reductions in carbon emissions.
- ▲ Current window converted to an actual sealed double glazed unit, therefore existing frame retained.
- ▲ Low cost in comparison to changing window frames to fit new double glazing.
- ▲ Installation takes place from the inside, therefore no influence from the weather and no need for scaffolding or ladders.
- ▲ No disturbance to internal decorative finishes.
- ▲ Only 45 minutes installation time per window.
- ▲ Installation is a 'silent' operation, therefore normal activities can continue.
- ▲ Guaranteed for 10 years.
- ▲ Payback period typically less than five years.
- ▲ External appearance of building preserved.
- ▲ Eliminates asbestos disturbance in old putty.
- ▲ No land fill for old frames or glass.



Installation of MISO 2000 System

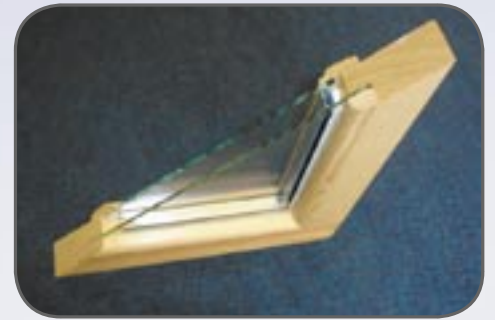
We will visit your site and take the measurements of the existing window frames. The details will be processed by the factory where the metal spacer frame and new window glass will be produced.

For thermal insulation, special 4mm Low E energy glass will be used. For noise insulation, 6mm or 8mm laminated glass is used.

The existing window is thoroughly cleaned and the new window pane is then bonded on the inside of the existing window glass using our patented method to ensure condensation will not form between the panes. Finally, trims will be added to complete the installation.



Metal frame



Wooden frame



Typical local authority SCOLA building with single glazed steel windows
- benefits greatly from MISO 2000

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