

# Freeze FRIA

*The things we take for granted also make for energy dependency. Ursula Tischner's FRIA integrates natural ventilation to bring lightness to the everyday fridge.*

Where would we be without our fridges? No preserving of foods until the all-important 'best before' date, no longer-lasting dairy produce; milk, cheese or butter, and no half-cooked meals being used up days or even weeks after they were lovingly, or hurriedly, created.

The technology of fridges have taken significant eco-steps forward in the last twenty years since the time they constituted one of the most harmful CFC-emitting, energy heavy, home comforts. Today in Europe, reassuring EU eco-ratings of A through G alert anyone looking for a lower-energy refrigerator of the efficiency of a fridge at the sales point shop-front. But fridges are still heavy energy users in the domestic household and commercial office. And they remain designed discreetly, separately from the context that is the room – usually the kitchen – and the building, into which they are going to be fitted.

A few years ago a German designer, Ursula Tischner, turned this logic on its head and, taking a leaf out of the traditional pre-fridge cooling chamber, came up with a completely reworked model, embedding an adapted fridge into the building design. Tischner called this the FRIA,



photos Ursula Tischner

integrating the pre-designed cooling space with the natural ventilation of the relevant, usually northern, wall, which cooled the ergonomically spaced freezer, fridge and cool-storage compartments, as well as further storage space into a pre-designed, naturally ventilated wall-cooling chamber. In place of the CFC-heavy cooling of conventional refrigerators, the FRIA can use non-CFC materials: blown concrete, cork or recycled paper. As soon as the external temperature is low enough, this cold air cools the FRIA, so only requiring a small fan to draw air through the filtering system, rather than a complete cooling system. FRIA is also a long-term domestic appliance, since every part can be replaced or exchanged because of the fridge's modular design. All in all the energy pay off is potentially remarkable: the FRIA uses at most half the energy of a modern fridge; there is no CFC usage; and energy waste, up to 80% in a normal fridge, is removed through FRIA's integration into the building's fabric.

Tischner's FRIA reworks the basics of design, integrating the potential of natural ventilation in building design into the modern conveniences that Western society takes for granted. In a sense it is a modern adaptation of the pre-fridge era, when storage areas were situated in the coolest part of the building, an orthodoxy that was lost with the rise of the mod cons society. If Tischner's holistic, whole kitchen approach hasn't been taken up as yet, it feels as if it is an idea whose time is waiting to arrive. Fridges are an assumed, if invariably invisible part of the domestic landscape. Natural doesn't really come into it, despite there being significant parts of the world where cold enough climates could play substitute for the ubiquitous sign of modern domestic normality for at least part of the year. The likelihood is more, rather than less fridges round the world. London's Bedzed mastermind Bill Dunster has said that the kitchen is a key element in ecodesigning whole buildings. Such a straightforward appropriation of natural ventilation, allying itself to future thinking about humble domestic appliances such as fridges in the guise of the FRIA, could transform how the likes of the kitchen are both conceived and actually realised in their design. *OL*