



DÖRR | i s t o
D | **Glas**
Alles fürs historische Fenster



Oranjestein, Oranjewoud

What do we do?

Histoglas glazing systems were specifically developed for the restoration and renovation of historic buildings. Histoglas allows one of the most important features of a building to be retained as it does not alter the fine detailing of the existing window frames in timber and metal.



Altes Forsthaus
Wiesloch

Our 10mm thin double glazing is the thinnest available on the market and is the result of extensive research. It is backed by a 7 year guarantee. The systems are available in a wide range of thicknesses and glass types to suit the age of a building, each with differing thermal and acoustic insulation properties.



Villa in Offenbach

Philosophy

Background

We are not glass manufacturers or double glazing people, we do not want to flood the market with cheap low-quality products. We have a background in traditional building materials. We are passionate about the quality and integrity of our products and their use in restorations.

One of the products used successfully was a thin double glazing system originally developed 30 years ago by us. As a joiner by trade and a window and conservation professional, I wanted to find a way to increase the insulation of existing windows in period properties with minimum intervention, without compromising their character and integrity. Because I couldn't find a suitable product on the market, I set about developing it myself.



Rathaus Burgkunstadt, mit Restover-Glas

Today

Today's product range is the result of many years of research and development. Our key challenge was to make a thin double glazing unit that would fit into a typical period, thin timber or metal glazing bar profile, whilst still being able to install it in the traditional way using a putty.

It is reassuring to discover that many people share the belief that, wherever possible, we need to protect our historic buildings for the enjoyment of future generations as well as looking at the possibility of saving energy. It is a shameful waste to replace timber windows when 95% of them can be restored.



Rathaus
Burgkunstadt

The use of the correct glazing for the period or style of property is of paramount importance. Windows make up an enormous part of the character of a building; they form a large part of the façade. One of the things that make looking at, for instance, a Victorian building so interesting is that in its original state it will have old hand-drawn panes. This glass reflects the light in a totally different way to modern Float glass. In old properties, modern Float glass just doesn't look right! We have a range of period glass types, which can be used as the outer pane for our thin units. This glass includes hand blown glass and different types of drawn glass, and it is still produced using traditional techniques.



Wormser Hof, Bad Wimpfen – double window, HISTOGLAS inside

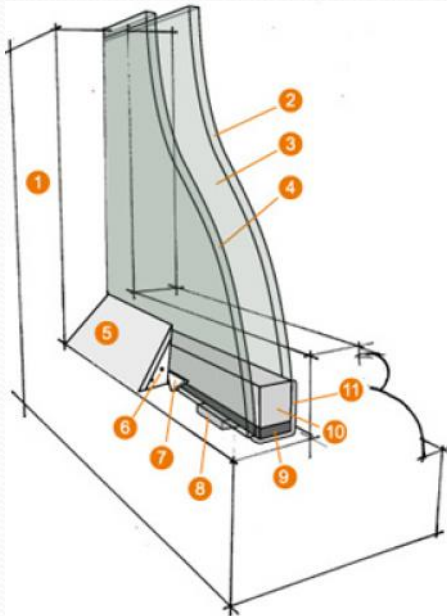
System

Thin Double Glazing

Available in 4 types: D10, D11, D12 and D13. Each providing varying acoustic and thermal insulation properties. The inner pane has a Low Emissivity coating, the cavity is gas-filled and the outer pane can be chosen from any of our glass types in the section single glazing.

In existing frames the rebate should be at least 16mm deep and 8mm wide. For new frames, the optimal depth of the rebate is 18mm, the width of the glazing bar 22mm (with a 9 -10mm rebate width).





1. Window frame
2. 3mm Low-E float glass inner pane
3. Gas filled cavity
4. Outer Pane
5. Paint overlapping onto the glass by 1-2mm
6. Modified putty
7. Sprig
8. Hardwood spacer
9. Perimeter Seal
10. Aluminium profile
11. Sealant



Wormser Hof, Bad Wimpfen – with MD-Glass

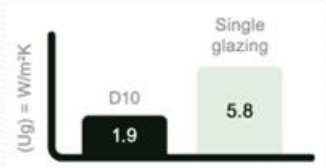
D10

Thickness 3-4-3mm (10mm)

Thermal Insulation 1,9 W/m²K

A decrease in energy-loss of 67% compared to single glazing of which $U_g = 5.8 \text{ W/m}^2\text{K}$

Weight 15kg/m²



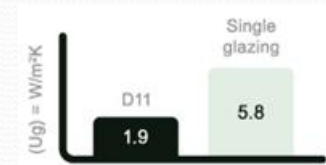
D11

Thickness 3-4-4mm (11mm)

Thermal Insulation 1,9 W/m²K

Noise Reduction 34dB (with test certificate)

Weight 17.5kg/m²

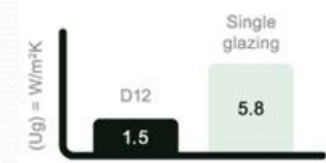


D12

Thickness 3-6-3mm (12mm)

Thermal Insulation 1,5 W/m²K

Weight 15kg/m²

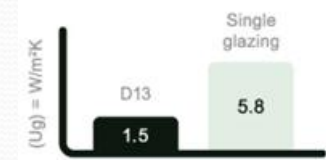


D13

Thickness 3-6-4mm (13mm)

Thermal Insulation 1,5 W/m²K

Weight 17.5kg/m²



Altes Forsthaus
Wiesloch
reproduction

Glass Types

Perhaps the most noticeable and yet misunderstood feature of a historic building is that of its glass and the way that glass influences both the atmosphere and ambience of the building. The influence of glass can be seen both internally and externally, working in a reflective and refractive capacity.



Wormser Hof, Bad Wimpfen

The most common glass in production today is float glass. This can be supplied in tempered / toughened and laminated versions. However, we have a wide variety of historic glass types manufactured for us that can be used as the outer pane in our units. Whether it's machine or hand-drawn glass, hand blown glass or obscured glass.

Because of this we have all of the old glazing types, according to the old recipes and production techniques. We don't offer imitations. The ream and seed in old glass types has a certain density, frequency and pattern and cannot be imitated. There is no substitute!



comparison: conventional window with standard double glazing and our specially developed window „System Dörr“ with our HISTOGLAS



Float Glass

Float

Late 1950s onwards. This type of glass is most commonly seen in buildings constructed from the 1960s onwards.

With modern production techniques, float glass can easily be turned into safety glass. There are two main types: toughened (or tempered) and laminated.

The first is achieved by heat-treating it to create tempered or toughened glass. The other option is a laminated safety glass - sheets of float glass are stuck together with a special interlayer foil. This holds the glass in place in the event of breakage.



Machine Drawn Glass

MD

Approx. 1915-1960. Our Machine Drawn Glass is made according the Fourcault principle. The Belgian Émile Fourcault invented a manufacturing process in which glass could be drawn directly from the tank at the working end of the furnace. The débiteuse, a boat-shaped slotted block made of refractory material, is pushed down into the molten glass. As the hot extruded glass rises through the slot it is grasped by the iron bait. The cooled glass then adheres to the bait and is pulled upward between water-cooled tubes, during which time it anneals. When it reaches the top of the machine, it is cut by automatic cutters.



MD-Glass



Hand Drawn Glass

Restover

Approx. 1860-1920. In the early 1860s a method was developed to produce cylinder glass more quickly and more easily. Molten glass was poured into a large bowl (or crucible) and a hot metal bait was dipped into this molten glass. Then the bait was drawn slowly in an upward motion, drawing a large glass cylinder after it.

It has fewer imperfections than the preceding cylinder glass, but the upward draw gives it a wavy character.



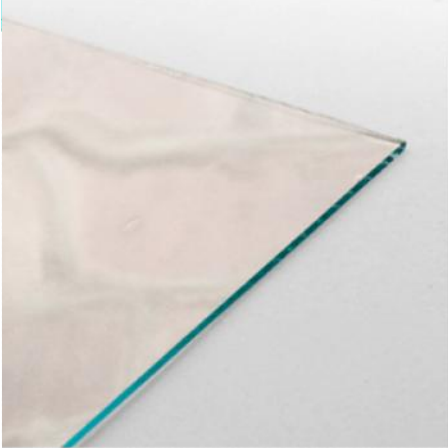
Restover

Hand Blown Glass

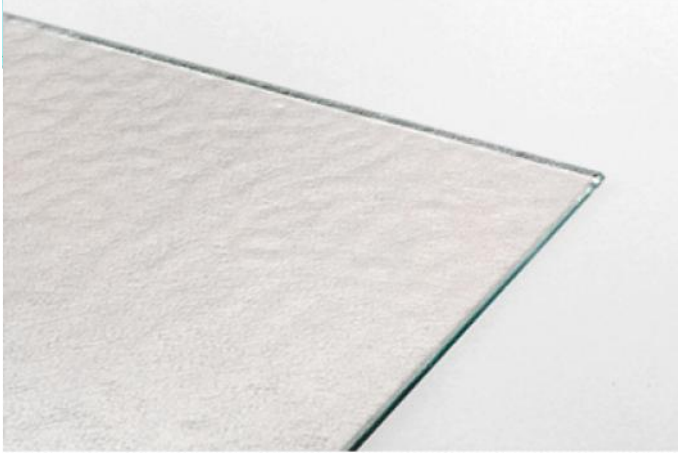
Cylinder

Approx. 1700-1860. This type of glass is the most difficult to give an exact date for, as both crown glass and cylinder glass were made and used alongside each other until the 20th century when crown glass appeared less and less. Until the late 1700s crown glass was dominant, after which it was pushed out of the market by cylinder glass. Unfortunately, the exact recipes and production techniques for crown glass have been lost and genuine crown glass is no longer made. This leaves cylinder glass as the only acceptable alternative.

Cylinder glass is made by a craftsman blowing a bottle-shaped cylinder. Once the cylinder is ready, the two ends are cut off and the cylinder is scored. This allows the cylinder, when reheated, to flap open to give a flat piece of glass, which is then annealed. This glass has a fair amount of imperfections and the ream and seed give it its distinctive characteristics.



Hand Blown Glass



Obscured Glass Kathedral Glass

Obscured glass is also known as textured, diffused or privacy glass. We have an extensive range of obscured glass, available in a vast array of colours, patterns and textures.

It can be used in combination with our full range of Histoglass thin double glazed units.



Kathedral Glass

All Histoglass units conform to BS EN 1279, parts 1-6 compliant.

		Thermal Performance U-value in W/m ² K	Acoustic Performance db
Histoglass Thin Double Glazing	D10	1.9	
	D11	1.9	34
	D12	1.5	
	D13	1.5	



Neckarufer
Heidelberg

Instructions for installation in Timber Window Frames

Histoglass is an extensively tested product which requires specific installation and this differs from regular double glazing installation. If the manufacturer's installation instructions are not followed, the product will automatically lose its guarantee.

These installation instructions are to be read in conjunction with the Kawo Elastokitt technical data sheet.



Installation:

1.
Rout the profile for a deeper rebate if necessary.
2.
Primer the profile with an oil based alkyd paint. Please contact us when using linseed oil based paints as these are only suitable to use as a top coat finish, not as an undercoat.
2.1 Drill 2 holes of 6-8 mm, from the inside out in the horizontal lower sill for airing.
3.
Apply the Kawo Elastokitt to the rebate.
4.
Put the glass in place, using wooden spacers (1.5 mm on all sides) and secure with sprigs.
5.
Fill the gap between glass and frame completely with the Kawo Elastokitt sealant.
6.
Using the Elastokitt as a putty, fille the remainder of the rebate.

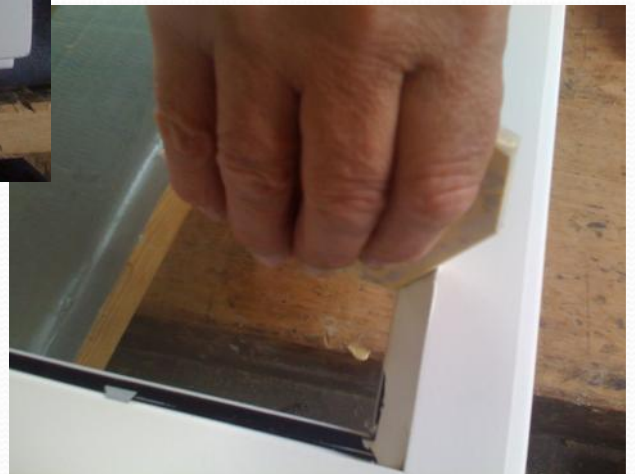


7.

When painting the windows, the paint should cover the putty completely, overlapping onto the glass about 1-2 mm. This is necessary to prevent water getting into the gap between the frame and glass as this could cause the wood to rot and affect the glass sealant. This is essential to maintain the manufacturer's guarantee. Preferably use oil based paints for top coat. Elastokitt cannot be painted with linseed oil paints! Water based paints will crack and discolour. Please note: particularly when using dark colours the surface of the putty can become slightly undulated. This is caused by natural components in the putty. This has only a visual effect and does not affect the quality. This effect can also be caused by the wood not being able to absorb these natural components. This does not influence the quality of the end product and as such constitutes no grounds for a claim.

8.

On the inside, use the Elastokitt to seal the gap between the glass and frame.



Guarantee

All Dörr Histoglass glazing has a 7 year guarantee from date of invoice against interior surface condensation. In the unlikely event of a manufacturing fault causing this condensation, Histoglass will provide a replacement free-of-charge. No additional claims can be made.

The variations MD (machine drawn sheet glass), Restover (hand drawn sheet glass) and Hand Blown Glass have the same characteristics as 'old glass' and will have the same imperfections (bubbles, fold marks or waves). These imperfections are an integral part of the character of the glass and, as such, obviously constitute no reason for a claim. Differences in size of + 1 mm at the variation glass types have to be tolerated. Spontaneous disruptions at ESG can't be excluded and are no reason for rejection.

Annual inspections of the glazing, frame, and paintwork are necessary. These checks are essential and must be proven in the event that any subsequent claim may arise.

May 2009



Instructions for the installation in Metal Window Frames

Histoglass is a tested product which requires specific installation and this differs from regular double glazing installation. If the manufacturer's installation instructions are not followed, the product will automatically lose its guarantee.

Measuring:

Units should be measured without clearance. We will deduct 1mm clearance all around.

Allowance should be made where the opening is not perfectly rectangular, but always ensuring that the sight line of the perimeter seal is below the sight line of the back rebate.



Schloßscheuer Weilheim – Metall-Holz-Fenster

Installation:

1. Prepare the rebate: remove any old putty and sealant and clean thoroughly.
2. Primer the profile with an oil based alkyd paint. Please contact us when using linseed oil based paints as these are only suitable to use as a top coat finish, not as an undercoat.
3. Apply the Kawo Elastokitt as a sealant in the rebate.
4. Put the glass in place, using wooden spacers (1 mm on all sides) and secure with pin or screw.
5. Fill the gap between glass and frame completely with the Kawo Elastokitt and use Elastokitt to create the putty line.



6.

After 1-2 days the Elastokitt can be painted. The paint should cover the putty completely, overlapping onto the glass about 1-2 mm. This is necessary to prevent water getting into the gap between the frame and glass, affecting the metal frame and perimeter seal of the unit. This is essential to maintain the manufacturer's guarantee. Preferably use alkyd paints for top coat. Water based paints will crack and discolour.

Please note: especially when using dark colours the surface of the putty can become slightly undulated. This is caused by natural components in the putty. This has only a visual effect and does not affect the quality. This effect can also be caused by the fact that the wood may not be able to absorb these natural components. This does not influence the quality of the end product and as such constitutes no grounds for a claim.



7.

On the inside, use the Elastokitt to seal the gap between the glass and frame.
Guarantee

All Dörr Histoglass glazing has a 7-year-guarantee from date of invoice against interior surface condensation. In the unlikely event of a manufacturing fault causing this condensation, Histoglass will provide a replacement free-of-charge.

The variations MD (machine drawn sheet glass),

GD (hand drawn sheet glass) and cylinder glass are meant to create the same look as 'old

glass' and will have the same imperfections (bubbles, fold marks or a wave). These imperfections are an integral part of the character of the glass and, as such, obviously constitute no reason for a claim. Annual inspections of the glazing, frame, and paintwork

are necessary. These checks are essential and must be proven in the event that any subsequent claim may arise.

September 2008



Wormser Hof
Bad Wimpfen

Projects

Histoglass thin double glazing has an impressive pedigree. It has been used extensively over the past 30 years on historic restoration projects in Germany, Austria, Switzerland and the Netherlands and is now also available in the UK. We are pleased to be working with many conservation and heritage organisations.



Paviljoen Welgelegen, Netherlands



Hauptstrasse 124, Heidelberg



Lange Steenstraat 4, Gent (B)



Villa in Dreieich-Buchsschlag



Oranjestein, Oranjewoud



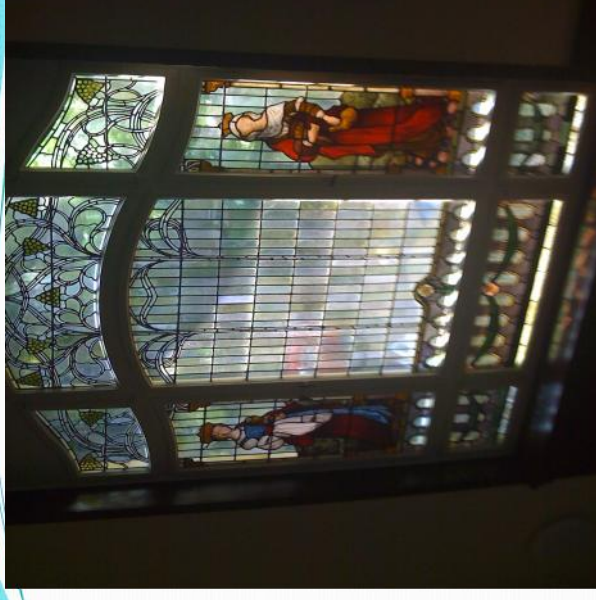
Villa in Offenbach



An example for the very apparent difference between restored original windows in the ground floor with HISTOGLAS D10 and modern standard windows from 1970 in the first floor – regardless of historic arrangement



Torturm Burg Wertheim



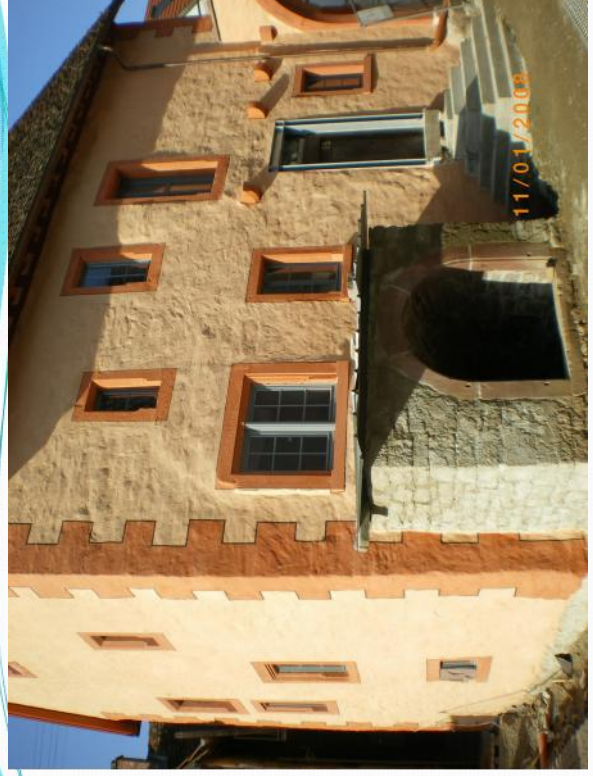
Villa in Frankfurt
Outside new double window with D10 and thereby inside preservation of the historic lead glazing with precious glass painting



Hirschberg-Sachsenhausen



Poststrasse Wertheim am Main



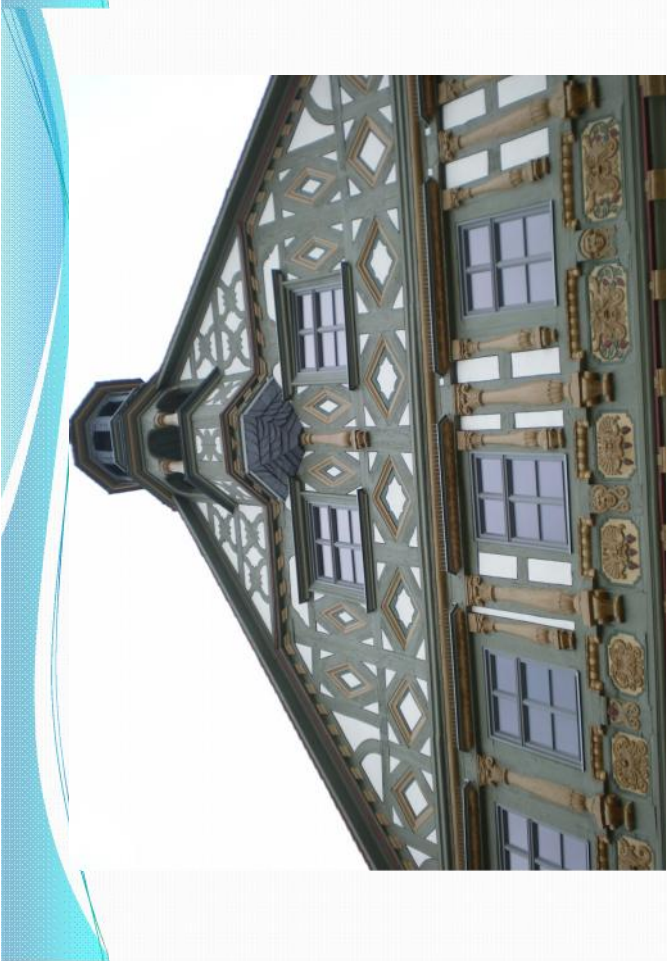
Hauptstraße in Bergheim, Stadtvilla



Rathaus Burgkunstadt



Rathaus Burgkunstadt



Rathaus Burgkunstadt



Wormser Hof, Bad Wimpfen



Villa in Gauting



White Rose Mill, Saxton - England



Laidlawstiel House, Galashiels – Scotland



Schloß Fürstenried



Year	Country	Place	Address
1995	Germany	Frankfurt	Schumannstraße 67
1995	Germany	Heidelberg	Dantestraße 51
1995	Germany	Eltville	Town Hall
1996*	Germany	Frankfurt	Schumannstraße 11
1996	Germany	Frankfurt	Bolongarostr. 103
1997	Germany	Buchen	Dr. Konrad Adenauerstraße 1
1998	Germany	Heidelberg	Kaiserstraße. 19
1999	Germany	Bad Soden Tau- nus	Former Rectory
1999	Germany	Heidelberg	Burgweg 5
1999	Germany	Rhaunen im Hunsrück	Former Magistrates Courts
1999	Germany	Lauf a/d Peg- nitz	Urlasstraße 24, Haus Schecken- hofer, Urlasstraße 24 (Upgrade of historic sash windows, improve- ment of acoustic insulation on railway and leaded windows).
2000	Germany	Dreieich- Buchsschlag, Hessen	Acoustic upgrading was needed in old windows in several historic properties on the urban railway.
2000	Germany	Stuttgart	Martin-Lutherstraße 92
2000	Germany	Berlijn	Am Sandwerder 17-19
2000	Germany	Heidelberg	Kurfürst-Friedrich Grammar School
2000	Germany	Heidelberg	Kaiserstraße 27
2000	Germany	Leimen	Bucheneck Castle
2001	Germany	Trier	Kurfürstlich Palace (also with security glass)
2001	Germany	Cottbus	Primary School Puschkinpromenade

Year	Country	Place	Address
2001	Germany	Grossmehlen	Castle
2001	Germany	Bietigheim	Castle
2001	Netherlands	Schinnen	Thull 1
2001	Netherlands	Schiedam	Lange Haven 85
2001	Netherlands	Valkenburg	Houthem
2002	Germany	Ballenberg	Rectory
2002	Germany	Neugattersleben	Historic Mill
2002	Germany	Nurtingen	Metzingerstraße 1
2002	Germany	Stuttgart	Morikestraße 69
2002	Netherlands	Terhorst	Old Farm
2002	Netherlands	Beek LB	Huis Nieuwenhof
2002	Netherlands	Loppersum	Westerembderweg
2002	Netherlands	Gulpen	Rijksweg 48
2002	Netherlands	Lopik	Residential property
2003	Germany	Karlsruhe	Schirmerstraße 2-b
2003	Germany	Neuburg	Castle
2003	Germany	Karlsbad	Evangelical Church
2003	Netherlands	Sweikhuizen	Farm
2003	Netherlands	Een	Hoofdstraat 27
2003	Netherlands	Zutphen	Coehoornsingel 112
2003	Netherlands	Wageningen	Gen. Foulkesweg 16
2003	Netherlands	Wassenaar	Estate De Horsten, de Raaphorst
2004	Netherlands	St. Nicolaasga	Donia State
2004	Netherlands	Klimmen	Kaardenbekerweg 5, Craubeek
2004	Netherlands	Apeldoorn	Villa Fam. Visser, Amersfoortseweg 3
2004	Maastricht	Wassenaar	Kruisherenklooster
2005	Austria	Badlschl	Trinkhalle
2006	Austria	Badlschl	Pacherlschlössl
2005	Germany	Munich	Cuvillies Theatre

Year	Country	Place	Address
2005	Netherlands	Noordgevel	Ursulinenklooster (convent)
2006	Netherlands	Doornburg	Badpaviljoen
2006	Germany	Bamberg	Villa Wolter
2006	Germany	Munich	Fürstenried Castle
2007	Germany	Munich	National Theatre
2007	Germany	Wertheim- Bronnbach	Bronnbach Abbey
2007	Germany	Magdeburg	Dom
2007	Switzerland	Engelberg	Abbey
2008	Germany	Quedlinburg	Fürstenhaus Weißenfels
2009	UK	Hayfield (Peak District)	Ridge Top Farm House - Through National Trust East Midlands
2009	UK	Lower Brailes, Oxfordshire	Rectory Bungalow
2009	UK	Galashiels, Borders	Laidlawstiel House
2009	UK	Saxton, Leeds	White Rose Mill

*This project was awarded with the “Denkmalschutzpreis 1996” (Historic Monument Award).

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DÖRR | histo Glas

Alles fürs historische Fenster

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