

# KANTEN

# NEWS

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**DÖLKEN**

KUNSTSTOFFVERARBEITUNG

A SURTECO COMPANY

# Touchable effect: The difference you can feel

Visual appeal is undoubtedly the key criteria for the design and purchase of furniture. However, the importance of touchable effects has increased significantly over recent years. People want to be able to feel what they see. This trend has inspired worktop manufacturers to create surfaces that can meet the desire for an individual and sensual experience. Döllken has been continually expanding its expertise in this area over recent years and is now offering the perfect solution for standard and unusual surfaces.

## Unusual surface textures

The new surfaces Linea and Smart by manufacturers Thermopal and Cleaf are now perfectly matched by a counterpart from Döllken: Macroline. This is a form of coarsely brushed texture that presents a rich range of accents in wood effect and solid colours.

Edges provided with a concrete look can now be given the appropriate feel. The new texture



Coarsely brushed texture: Macroline.

highlights the cool character of concrete and also complements the appearance of the item of furniture with a sensory experience.

The embossing known as Code is also unusual and new. The surface is similar to a barcode with a design that resembles a wave.

The concrete look now has the appropriate surface texture.



Similar to a barcode, resembling a wave: The new texture Code.



# Instant Edging Programme: Increased range of matches

The most extensive range of matching finishes ever: The latest expansion of the Instant Edging Programme means that ABS edgebands matching more than 9,000 designs are available to all the leading international worktop manufacturers – immediately ex stock.

A large proportion of the matching finishes was published in the new catalogue – the Matching Finishes List 09/2007 – at the end of last year. A CD was included with this catalogue for the first time with all the key information about the ex-stock range. Another major feature is the Edgeband Finder. This is the electronic version of the printed Matching Finishes List. Building on

the printed edition, other worktop manufacturers in the Döllken Matching Finishes List are also featured here.

Naturally, you can also access the Edgeband Finder and consequently the massive range of matching finishes on the Internet by clicking on [www.doellken-kv.com](http://www.doellken-kv.com) – always up to date.

*The latest Matching Finishes List includes approximately 45 worktop manufacturers on more than 240 pages.*



*The Edgeband Finder on the Internet helps you to find a matching edge – in German, English, French and Russian.*

Platte	Dicke	Kanten-Bl.	Substrat	Prägung	Abmessung
H801	Kirschbaum Classic	01.1001	ABS	FF180	25x2
H802	Kirschbaum Classic	01.1001	ABS	W200	25x2
H803	Amalgam Cherry	03.0115	ABS	W200	25x2
H804	Kirschbaum	01.1001	ABS	W200	25x2
H805	Kirschbaum Teakene	01.1001	ABS	W200	25x2

## EDITORIAL

### The perfect match!

Design and function, quality and innovation, diversity and service. We believe that each of these pairs forms a perfect link. We develop sophisticated product solutions and concepts based on these factors. Our perspective is primarily that of an innovator in the production of edgebanding. We take up current trends and transform them into competitive products for the marketplace. For example, we have developed a wide range of different approaches to high gloss and we are confident that these will give you productive design ideas. One of our missions is to set trends – like the 3D edge that is now used as a design element throughout the world. Moreover, we know that it has a great deal more creative potential. The new Fusion Edge is one of our latest creations involving a new edge generation. This edge is created without using conventional hot-melt adhesive and at the same time eliminates the adhesive joint. This edge may prove to be the foundation stone for an innovative process.

Expansion of our warehouse concepts enables us to offer you an even bigger selection and a higher level of flexibility in the procurement of small volumes within a very short space of time.

Our mission is to give you the edging solution with the perfect match. That's our idea of: The Perfect Match!

Your Döllken Team

# Fusion Edge: Glue free processing with no joint



*The perfect union of edge and panel - entirely jointless and without the application of conventional hot-melt adhesive.*

The adhesive joint between plastic edge and worktop is likely to be consigned to the history books very soon.

Development engineers at Döllken have succeeded in taking a revolutionary step by originating a completely new edging generation and innovative processing.

The new edge is called “Fusion Edge” and it will be processed entirely in the absence of conventional hot-melt adhesives.

The new laser joining technique effectively moulds the edge to the worktop. This creates a perfect

union – entirely without adhesive joints.

The Döllken development project demonstrates that the Fusion Edge delivers key visual benefits while also consigning the disadvantages of conventional bonding to the history books.

## **Zero joint**

Engineers at Döllken have been carrying out research into the “zero joint” for years now. The goal of the development study was to create a seamless transition

between the edge and the panel without any of the visual impairments associated with bonding joints.

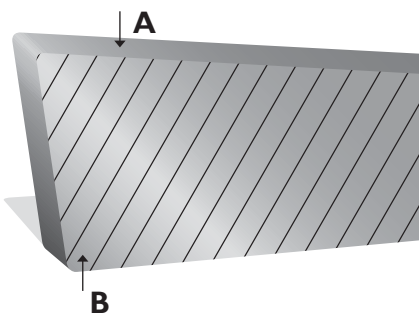
Developing an edge without having to apply conventional adhesive formed the starting point for the research.

The solution is a co-extruded edge made of two different layers. It comprises a base layer made of ABS or PP which bears the design or colour of the edge. It also has a functional layer which bonds with the panel.

## Laser joining technique makes it all possible

The functional layer has to be melted in order to join the edge to the panel. This is carried out using the innovative laser joining technique. This has been in use for many years to join metals or plastics together.

Döllken joined forces with the Fraunhofer Institute in order to carry out the necessary research with a blue-chip partner. The aim was to investigate and develop application of the laser joining technique to bond the Fusion Edge with a conventional chip-board surface. An industrial edge bonding machine was equipped with a high-powered state of the art laser. The point laser beam is shaped to form a line laser beam. The beam melts the functional layer of the edge which then bonds with the worktop.



A: Co-extruded base layer 1.0 - 2.0 mm made of ABS or PP  
B: Functional layer

## Impressive processing results

The results were impressive and justify the enthusiasm of the expert team. Tests with chip-board, MDF and honeycomb boards demon-

strated equal or improved bonding strength compared with conventional edge processing.

Tests with different process speeds produced positive results overall.

Processing speeds ranging from 10 - 50 m / min can be achieved depending on the laser power.

The joint seal in conformity with DIN 68861 also proves to be better - even in the hardness test when submerged in water for a period of 48 hours.

The sample delivered dream results for the visual appearance of the joint. The colour of the functional coating is matched to the base layer. The laser energy causes the functional coating to melt and form a firm joint with the panel without any bonding joint to impair the visual profile.

This really is a genuine "zero joint".

## Benefits of the new procedure

Apart from the outstanding visual effect, furniture manufacturers derive huge benefits in terms of more efficient procurement and processing. One component is eliminated entirely - hot-melt adhesive! This achieves a reduction in purchasing and manufacturing costs. Eliminating the adhesive also optimizes the production process. For one thing, tooling times are cut down radically. There is no longer a need for time-consuming adjustment of adhesive volumes and

bonding temperature when different materials have to be joined together.

The process of optimization eliminates downtimes with a resulting increase in productivity.

## Registered for a patent

The results of the Döllken research project highlight the fact that processing co-extruded edges with the assistance of laser joining may well be the procedure for applying edges to worktops on an industrial scale in future. Döllken identified this key technology at an early stage and has registered its innovative development in the form of a patent.



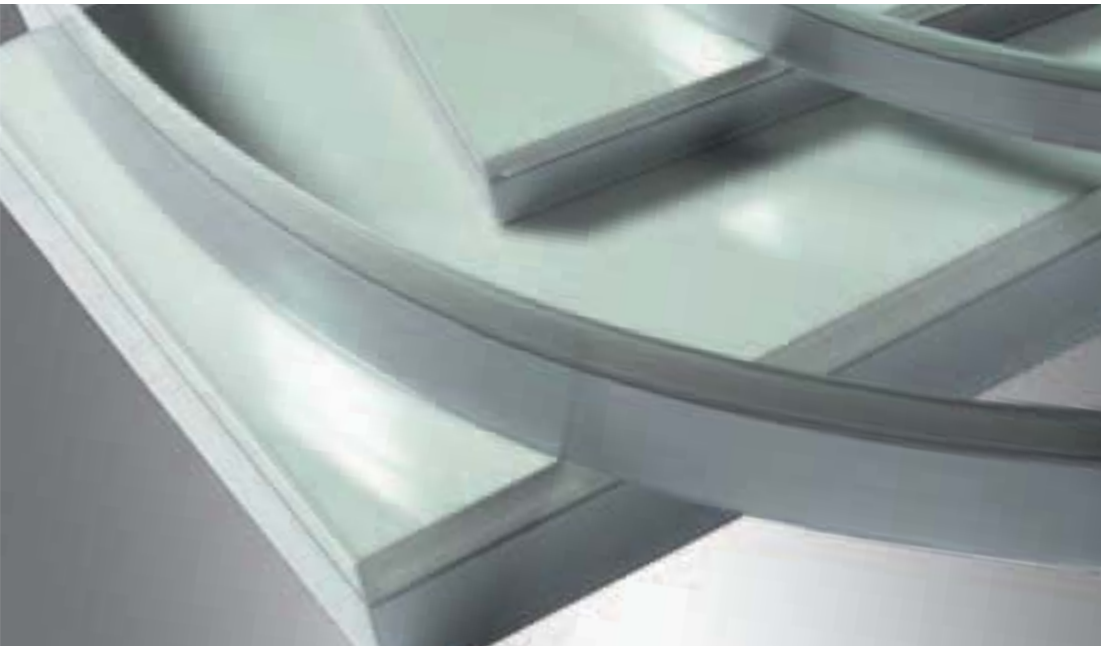
Döllken Fusion Edge:  
WINNER OF THE  
M TECHNOLOGY  
AWARD 2008



Laser joining procedure:

The functional layer of the Fusion Edge is melted by a laser and forms a strong bonding joint with the panel.

# Two in One: Perfect glass effect

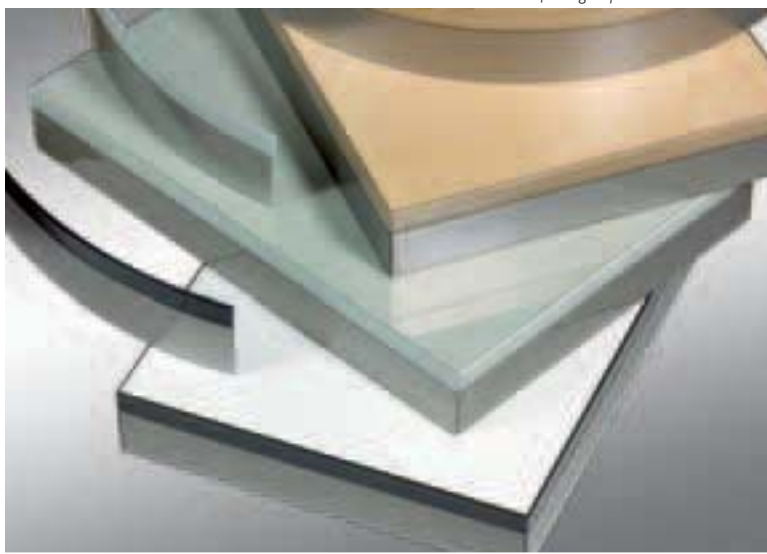


*Simulates glass: Two in One on high-gloss panels.*

For a very long time, furniture design was determined by uniform panel dimensions. At the moment, thick and thin furniture elements are currently shaping the furniture landscape. This development is seeing old-established materials being replaced or augmented. Glass is increasingly being featured in this new constellation. It is applied to a base panel or inserted within a metal frame. The refined visual profile enhances the appearance of

worktops and front panels. Although this material has a high level of visual appeal, the weight of glass and the brittleness of the material mean that it is by no means ideal for furniture manufacture. These aspects continue to present problems for subsequent transport and in routine, everyday use. This is why furniture manufacturers are on the look-out for alternatives without having to abandon the advantages presented by the visual properties of glass.

*A multitude of design options with Two in One.*



## Two in One in 3D

Döllken has developed a highly ingenious edging solution precisely tailored to this application: Two in One in 3D! The edge is provided with two decor designs applied in parallel, e.g. the pastel green typical for glass and a metallic colour.

The designs are on the reverse of the transparent acrylic base material to achieve a spatial 3D effect and provide a perfect imitation of the characteristics displayed by glass.

Applying this edge to a pastel green high-gloss panel simulates an astounding effect – the visual appearance of a glass panel which has been set into a metal frame.

Apart from the deceptively genuine glass appearance, this smart alternative delivers major benefits.

Firstly, it is not brittle and this is a big plus during transport – particularly for flat-pack furniture.

Secondly, the weight of the furniture does not increase significantly as would be the case with glass. This means that no separate mountings are required for front panels to accommodate the additional load.

Apart from the visual effect of glass, other design versions are also conceivable.

For example, it is possible to perfectly simulate a solid-core appearance but at a significantly reduced cost!

# Metallic edge design: From chrome to brushed aluminium



*Two in One: Chrome becomes the ultimate eye-catcher in combination with wood.*

Metallic elements have been an established element in furniture design for many years. This is a trend that is likely to continue for some time. For example, chrome appears to be enjoying a renaissance at present. The mirror finish has remained a classic in bathrooms for years.

This material is now spreading to other worlds of living, although brushed aluminium continues to remain a metallic eye-catcher.

## **Two in One in chrome**

Chrome is neutral, chrome is clear, chrome is clean. This is why

designers like to use it with “colours” like white and black. But in combination with a wide range of wood-effect designs, chrome is really stealing the show. Döllken has taken up the theme and reinterpreted chrome with a unique profile. This has been derived from the popular “Two in One” version. Two different visual effects are unified in parallel on one edge. In this case, chrome and a wood-based design, e.g. Walnut or Multiplex.

## **Brushed aluminium**

Aluminium has become established as a fixed parameter among metallic versions.

Brushed versions are particularly popular in virtually all areas of furniture, because their finish is not sensitive to further processing and during their working life.

3D and ABS provide an ideal solution from Döllken for this long-standing favourite.



*Brushed aluminium: Döllken is presenting new, attractive versions for this long-standing favourite.*



## 3D Premium Gloss: Highlight in high gloss



High gloss is in. The current trend is being implemented in virtually all living areas: mirror-finish surfaces as far as the eye can see.

The aspirations for the surface properties of the products being used is on an upward trend.

The same is also true for the narrow finishes, for example the plastic edge.

Döllken presents its latest 3D edge in premium gloss. This high-end product creates a dazzling effect that is a world first.

### **3D edge for a brilliant, glossy finish**

Craftsmen and industry have always regarded the 3D edge as the perfect board finish when it comes

to edging high-gloss boards. The main factor here is the premium material made of transparent PMMA.

Since the design image is affixed to the reverse side, the finish of the extruded edge – normally provided with a silk finish – can be polished to any level of high gloss.

### 3D Premium Gloss

However, the new 3D edge “Premium Gloss” completely eliminates the polishing stage.

A refined production process provides the 3D edge with an unparalleled and stunning high-gloss finish in a world first.

The properties of the edge feature excellent surface resistance.

This provides a robust finish to withstand mechanical and chemical influences.

of edges in ABS, PVC and PP – always precisely matched to the level of gloss finish and the design profile of the board.

Custom production for Döllken’s high-gloss range to meet individual customer needs is complemented by a stocked range in ABS.

10 trend colours from Ferrari Red through Apple Green to Cappuccino can be supplied in 23 x 1.3 mm at short notice.

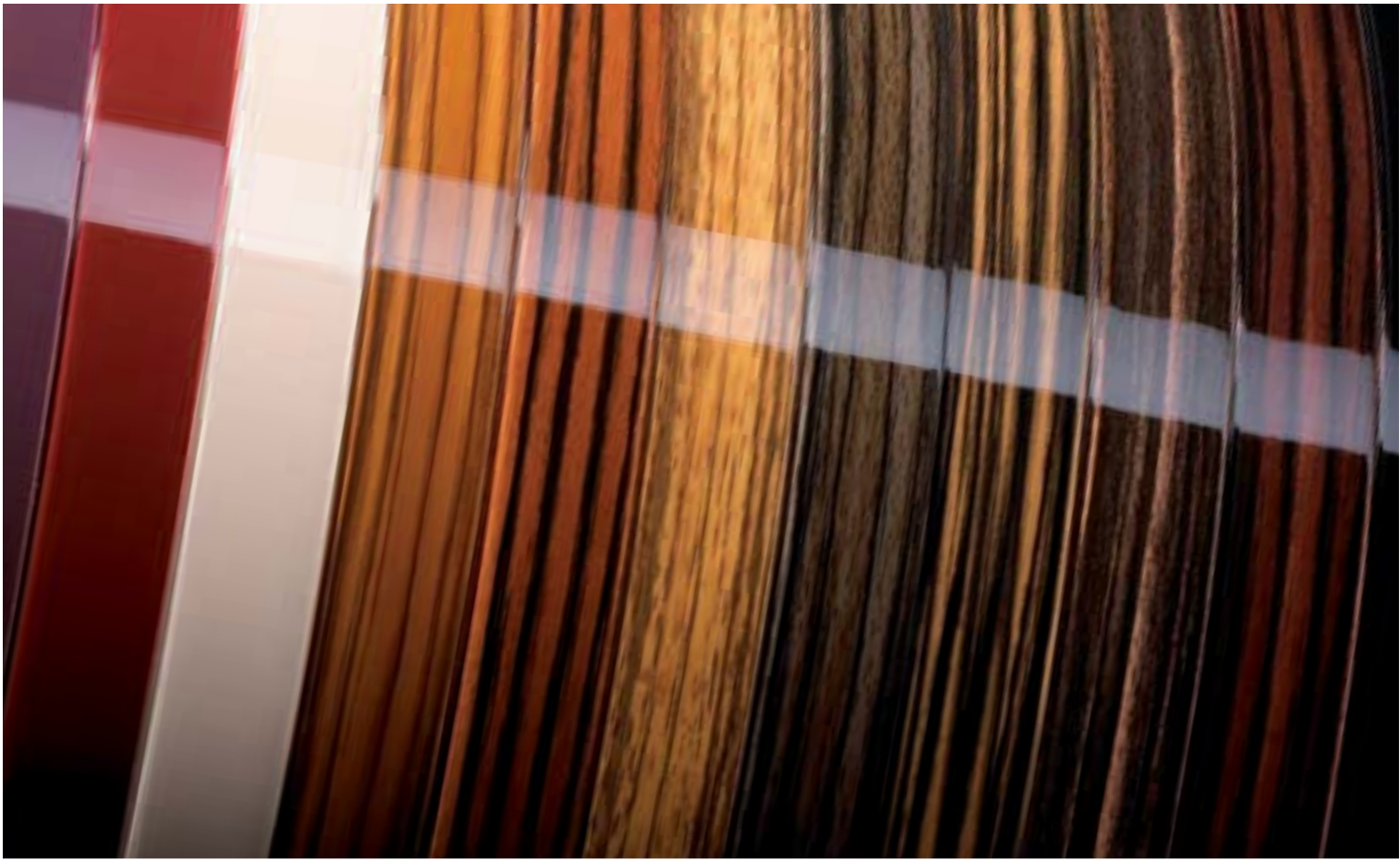


High gloss in ABS ex stock.

### Always the right high-gloss solution

Döllken has a varied range of edging solutions to meet a broad spectrum of requirements and sophisticated aspirations. Apart from PMMA, there is also a choice

High gloss to perfection: 3D Premium Gloss.



# Lightweight construction: Intelligent edging solutions



The subject of lightweight construction has been an issue in the furniture sector for some time. Following the board manufacturers, the supplier industry has now also developed appropriate products. Last year, Döllken presented intelligent edging solutions made of plastic for the first time. These are ideal for application in latchless lightweight boards, e.g. in a honeycomb structure. The particular edge used depends essentially on the thickness of the lightweight board and the decks (top coatings).

## Conventional edge is adequate

Currently, boards with thicker decks, e.g. 8 mm, are installed. These have the advantage that conventional fittings can be installed due to the adequate deck thickness. In this case, it is not necessary for the plastic edge to meet additional requirements. However, boards up to 50 mm in thickness should have decks with a thickness of at least 2 mm. The thickness of the edge should increase as the board becomes thicker.

## Bonding edge from Döllken

The stability of lightweight boards with thinner decks, e.g. 4 mm, should be enhanced with an additional support function. They can then be provided with a design edge. Döllken supplies the Bonding Edge for this application. Like any other edging, it is supplied as a roll and then undergoes machine processing. Conventional procedures mill a groove into the decks and the Bonding Edge is then inserted into this groove. The design edge can then be applied.

The advantage compared with comparable competing products: the edge is continuously perforated. When the bonding with the decor edge takes place, the adhesive penetrates through the holes of the Bonding Edge and creates a very strong bond between the two edges. The adhesive also bonds with the honeycomb core of the board. The special formulation for the material means that the bonding edge offers the necessary stability combined with flexibility, and it is ideal for processing radiuses.



A 2 mm edge can be used for boards up to 50 mm and 8 mm decks.



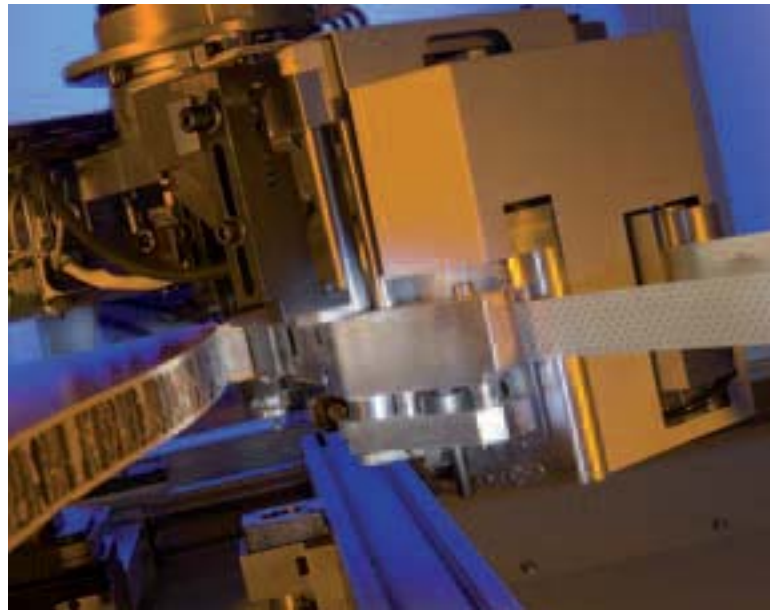
The Bonding Edge is used for boards with decks measuring less than 8 mm.

## DoubleEdge procedure from Homag

The Bonding Edge is also ideal for use with the DoubleEdge procedure developed by Homag.

An adhesive operation bonds the support edge with the design edge to form a T-shaped profile, and bonding into the lightweight board takes place during the same operation. This procedure operates seamlessly with the Bonding Edge because it is absolutely planar and the edges have very tight tolerances. The “anchoring effect” of the perforation also plays an important role in the adhesive stage here.

The new DoubleEdge procedure from Homag joins forces with the Bonding Edge to gain a substantial saving in time and cost, because adhesive is applied to all the materials in a single stage and they are only involved in the process once. This is particularly evident when it comes to processing materials on BAZ machines. The excellent properties of the Bonding Edge made of PP allow it to deliver flexible bending proper-



*The Homag DoubleEdge procedure is used to bond the Bonding Edge from Döllken with a design edge to form a single unit. This is then bonded to the board.*

ties for free-form components. This can be sustained with fast throughput times.

### Edge as “T-shaped profile”

Döllken offers an exciting alternative based on the process described above. This is an edge that has already been designed as a T-shaped profile. This enables it to be easily bonded with the lightweight board using a conventional edgebanding machine. However,

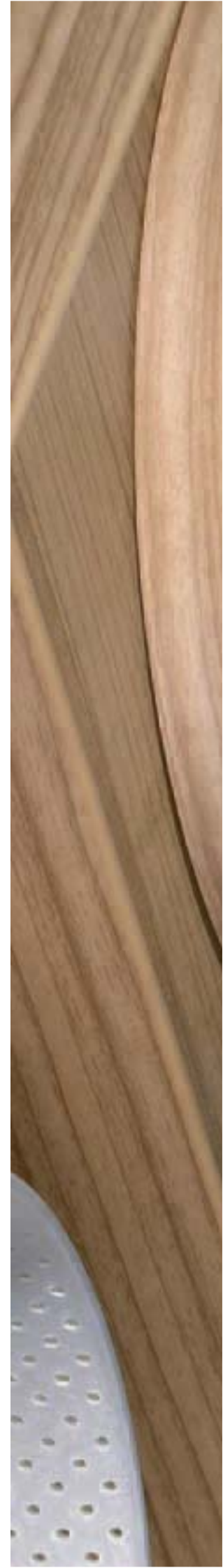
the latest status of machinery engineering means that this edge version is only suitable for edging extruded products.



*Finished item of furniture: with the DoubleEdge procedure from Homag.*



*The “T profile” from Döllken.*



# Thin edges: New storage concept

Edges made of plastic are gaining increased popularity on the international market. Melamine is gradually being replaced in the thin-edge sector by the higher-quality plastic version. This is a trend that is being driven by higher quality aspirations and it is set to continue. Döllken recently expanded its product range by implementing a new storage concept with the aim of meeting demands for small as well as large batch sizes and short delivery times. This concept was recently developed specifically for customers of thin edges.

## Premium quality

The high standard of quality makes thin edges from Döllken particularly impressive.

This is a key reason for the ongoing replacement of melamine by plastic. The flexible material characteristics of the plastic demonstrate a high degree of impact toughness. This means that Döllken edgings offer significantly higher protection

against damage, e.g. parts of a piece of furniture splitting away – both during production and transport or in later use. The enhanced “protective factor” leads to a significant reduction in unnecessary complaints and resulting additional and follow-up costs.

Benefits also accrue during processing where breakages during trimming and milling are virtually unheard of. Downtimes are reduced, production costs are cut.

## Huge diversity

The warehouse range has more than 80 different colours and designs finished in this enhanced quality. The selection is based on the most popular international versions.

Döllken has also adopted the material ABS due to the focus on geographically diverse markets. ABS will continue to pursue an upward trajectory in the edging sector.

## Small batches

The special feature of the new thin-edge warehouse concept is primarily fast availability in relation to volume. Colours and designs can be purchased in the size 22 x 0.45 mm even in quantities of only 1,000 m – and at short notice. Purchase batch sizes are easy to optimize and inventories can be reduced easily.

Even if the price of the plastic edge is comparatively higher in purchasing, this is offset within the big picture of overall pricing.



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