



## KEILVERBINDER

Fitting system



## APPLICATIONS:

- **SHELVING**
- **DRAWER FRONTS** for fronts 5mm thick and up
- Concealed, detachable **PANEL COVERS**
- **EXHIBITION/TRADE SHOW STAND CONSTRUCTION**
- **TIGHT SPACE ASSEMBLY**, slides on from the front
- **FLAT-PACK FURNITURE**
- **WOOD-METAL-CONNECTION**
- **REPAIR**, for correction of bulging parts
- Ideal for **NESTING-SYSTEMS**

## ADVANTAGES:

- **INVISIBLE MOUNTING**  
for minimalist design
- **DETACHABLE CONNECTION**
- **SPACE-SAVING AND VERSATILE**  
suitable for thin panels
- **TOOL-FREE ASSEMBLY**
- **QUICK AND EFFECTIVE**
- **PRESSURE AND TENSION RESISTANT**
- **PATENTED SYSTEM**

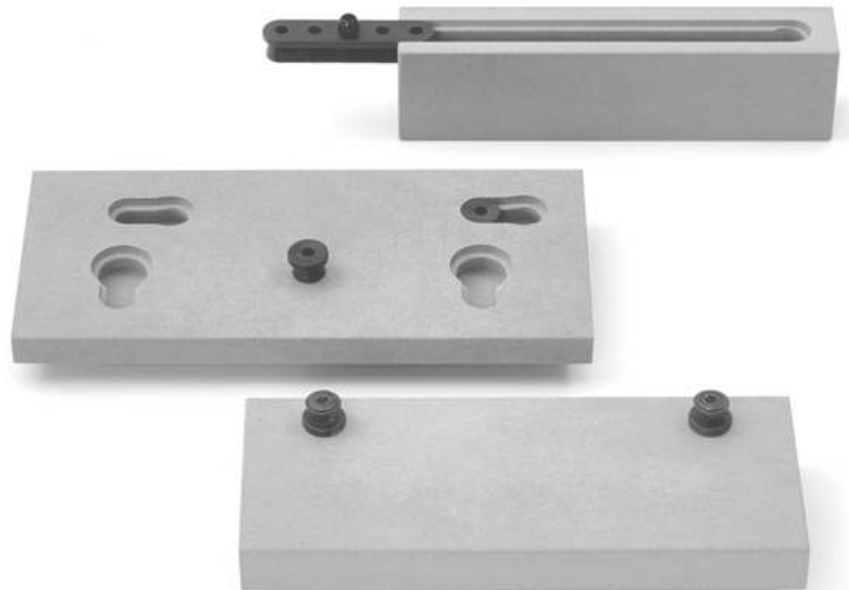
The **KV-SYSTEM** utilizes the proven dovetail principle.

It combines the **aesthetic** expectations for a concealed, detachable furniture fastener with a variety of **efficient** application options.

The system is variable to provide both common areas of application as well as individual special solutions and large-scale industrial applications.

# CONTENT

- I **TYPICAL APPLICATIONS**
- II **SYSTEM KVS AND KVD**
- III **SYSTEM COMPONENTS**
- IV **TECHNOLOGY**
- V **SAMPLES**
- VI **COOPERATION**

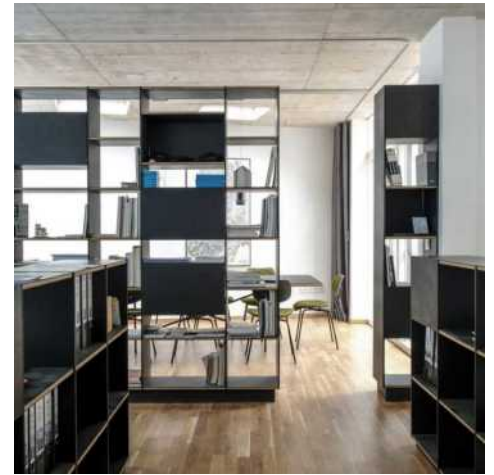




Shelving and wall units



Shopfitting



Room divider

## APPLICATION EXAMPLES



Masterpiece Bastian Zahn



Drawer front invisibly fixed



Sleeves for mounting



Wood-metal systems



Oak connected with 2mm raw steel-elements

## APPLICATION EXAMPLES



Flat-pack table



Design Jonas Finkeldei



Built-in furniture

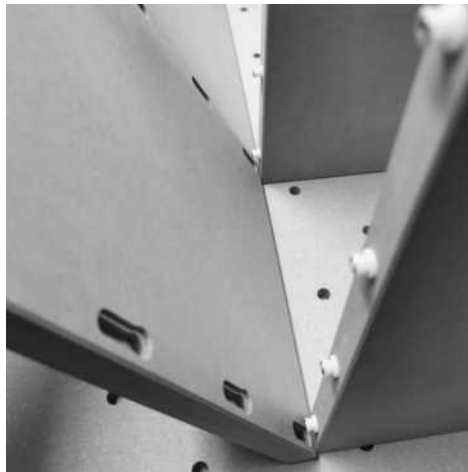


Modular plug-in systems

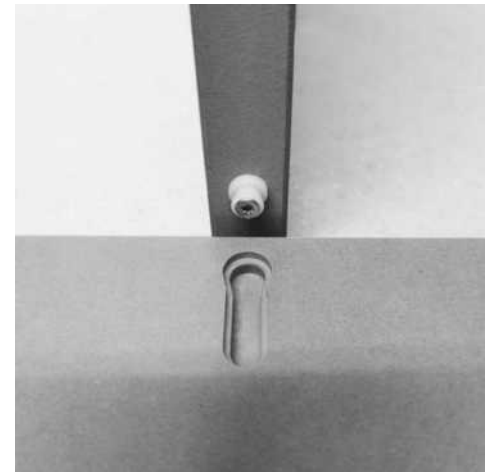
## APPLICATION EXAMPLES



HUB mini, Design Felix Angermeyer



Flat-pack furniture



Tool-free assembly



Ready-to-fit sideboards



Exhibition construction

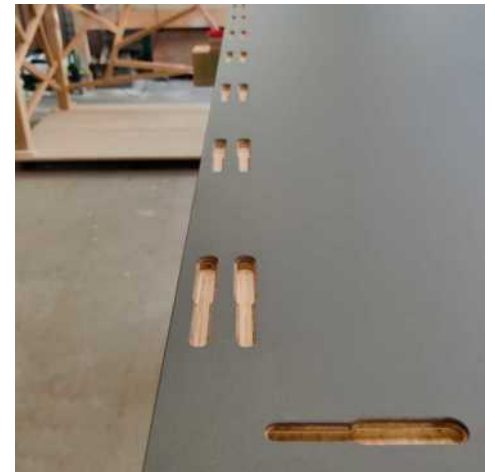


Endless shelf construction, extendable

## APPLICATION EXAMPLES



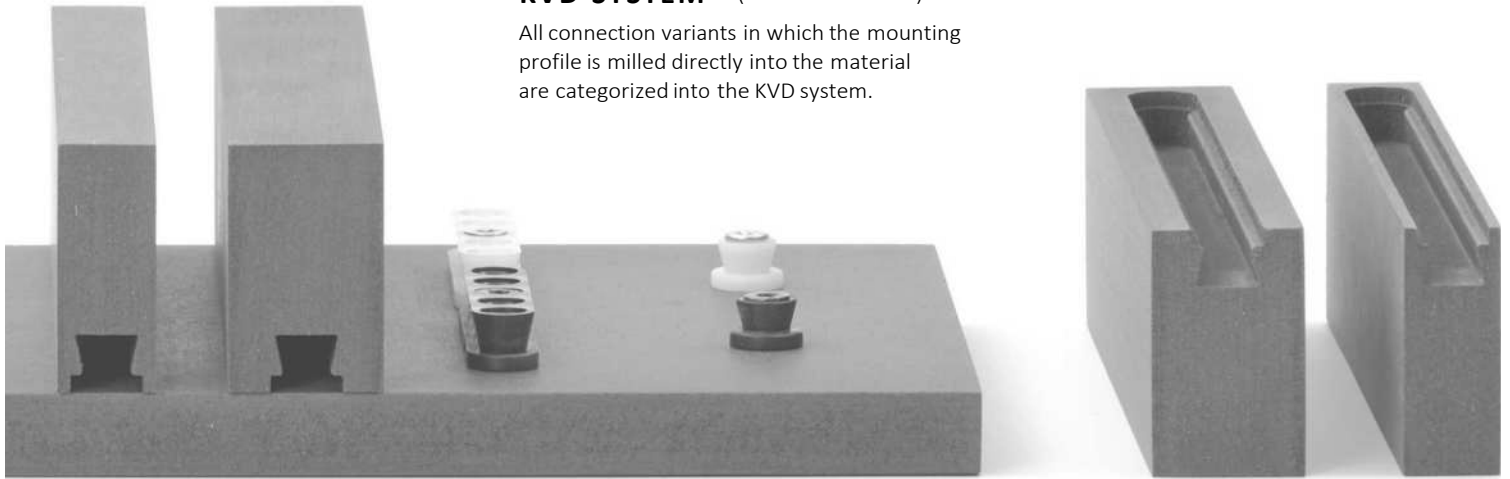
Masterpiece Manuel Zull



KV-Pocket in the underside of the table top

### **KVD-SYSTEM** (KV sleeve - Direct)

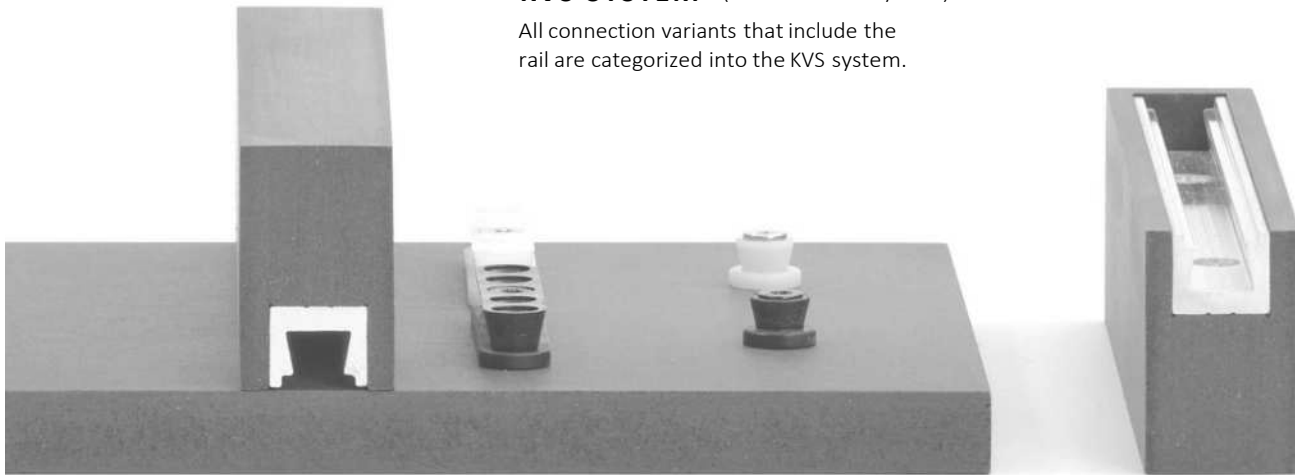
All connection variants in which the mounting profile is milled directly into the material are categorized into the KVD system.



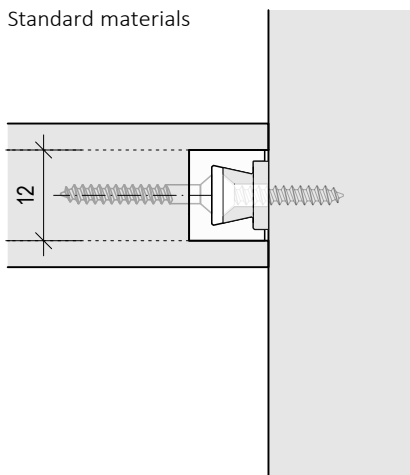
## **SYSTEM VARIANTS**

### **KVS-SYSTEM** (KV sleeve - railSystem)

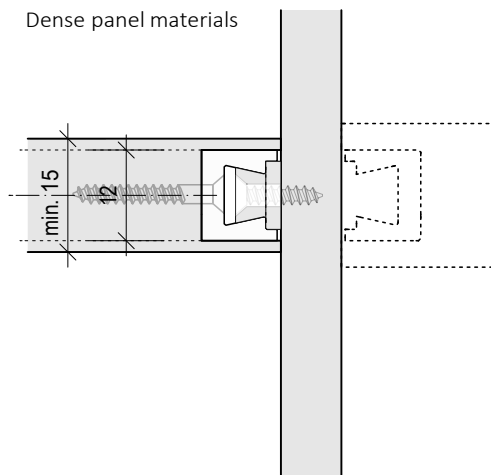
All connection variants that include the rail are categorized into the KVS system.



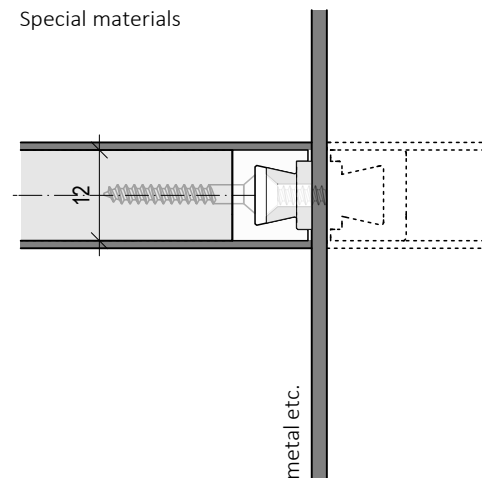
Standard materials



Dense panel materials



Special materials

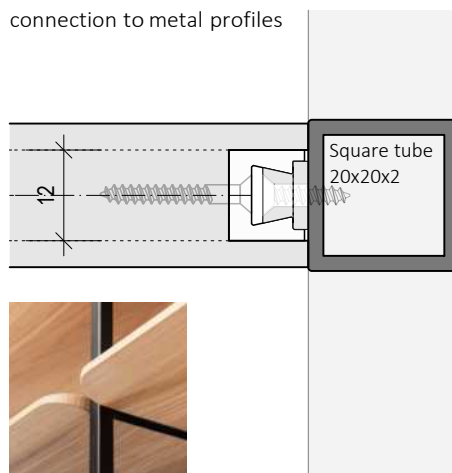


## SYSTEM VARIANTS



© Pepe Nitz

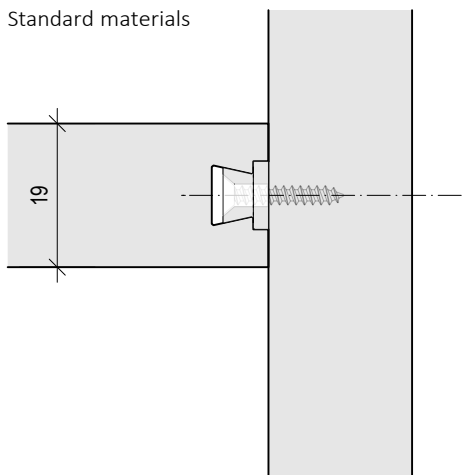
connection to metal profiles



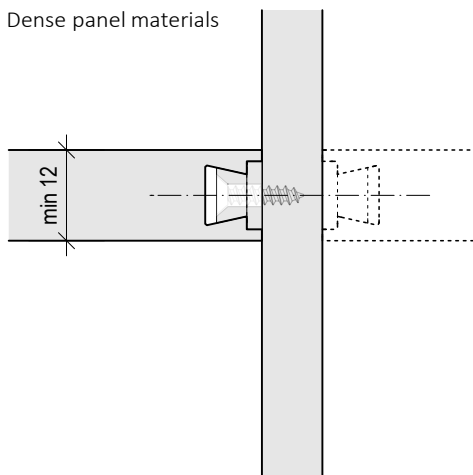
## KVS-SYSTEM



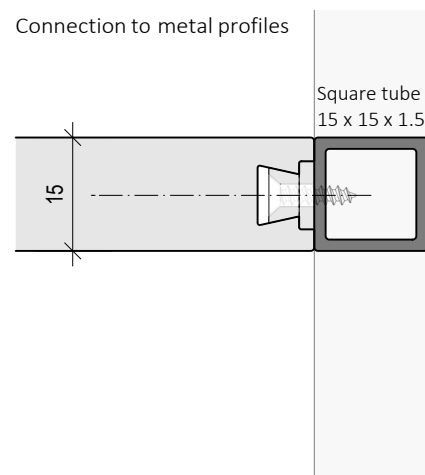
Standard materials



Dense panel materials



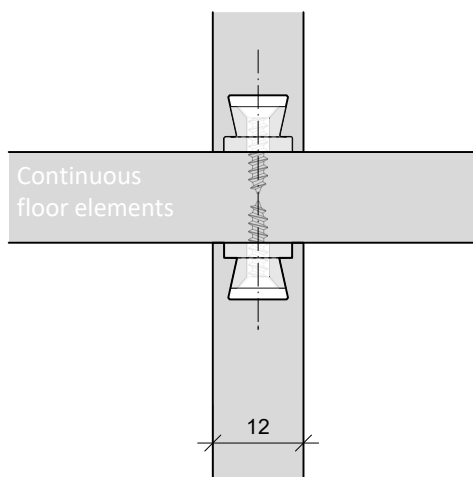
Connection to metal profiles



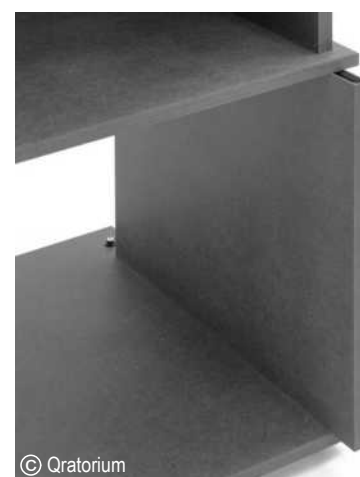
## SYSTEM VARIANTS



Sideboard, plug-in system KVD, 12mm of thickness

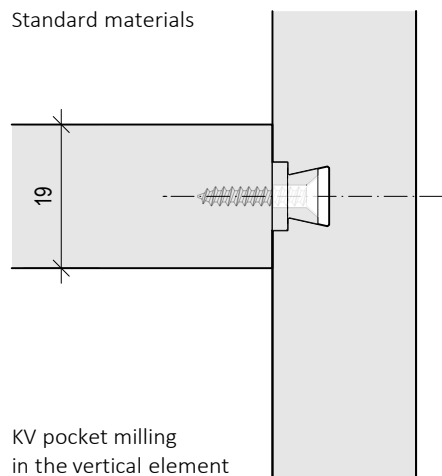


## KVD-SYSTEM

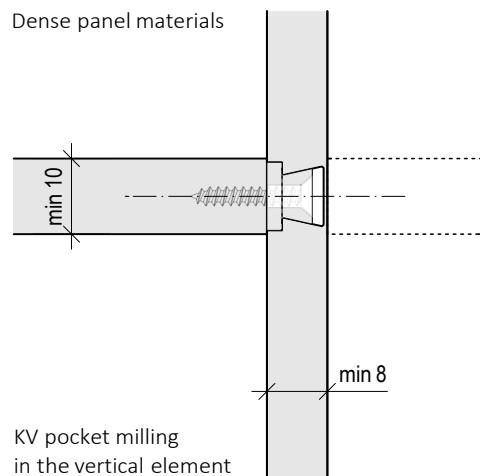


© Qratorium

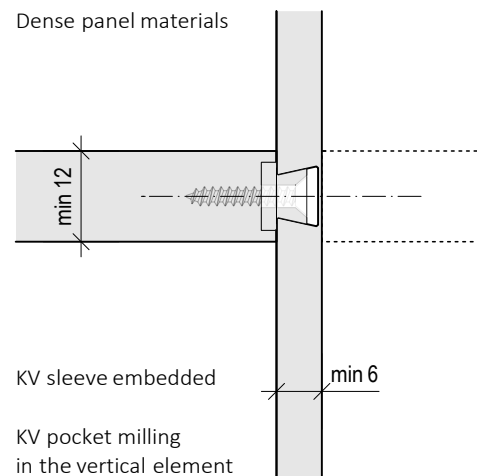
Standard materials



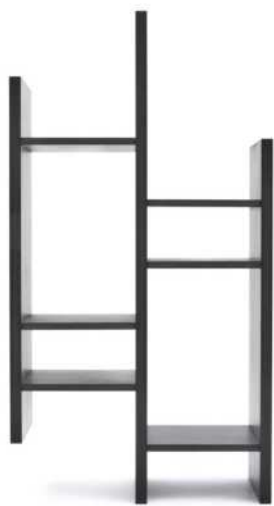
Dense panel materials



Dense panel materials



## SYSTEM VARIANTS



Hanging shelf, connection with KV pockets

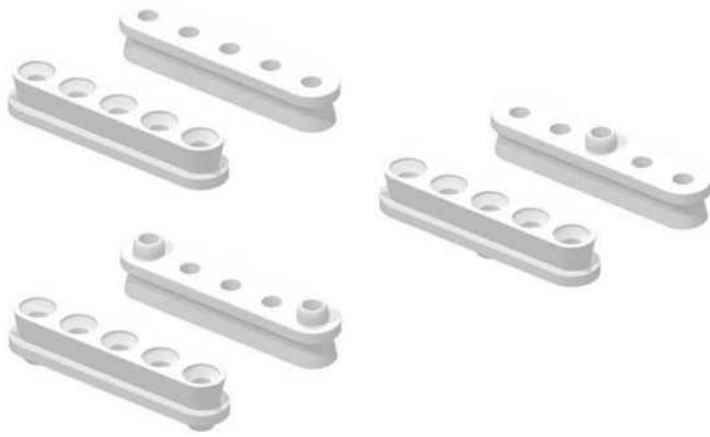


KV pockets detail

## KVD-SYSTEM



The invisible connection can be assembled without any tools.



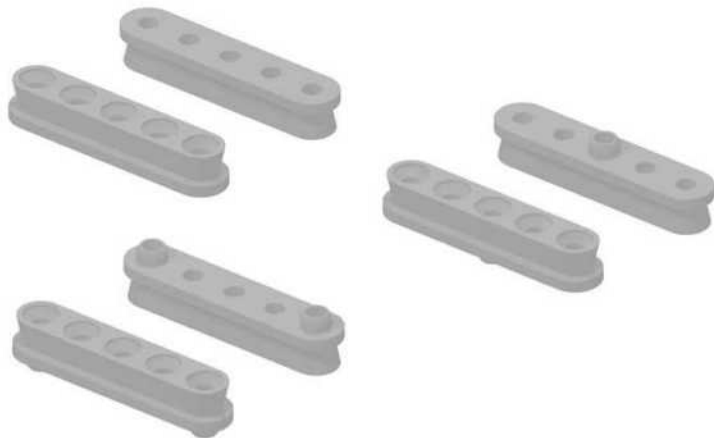
KV LONG SLEEVE

DRILLING JIG KV LONG SLEEVE



KV SLEEVE

## SYSTEM COMPONENTS



KV LONG SLEVE

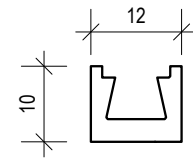


KV RAIL



KV CUTTER

<b>Item name:</b>	KV rail		
<b>Item number:</b>	S 115-2	EAN: 900 27 30 83 99 06	
	S 295-2	EAN: 900 27 30 83 99 13	
	S 595-2	EAN: 900 27 30 83 99 20	
	S 3000-2	EAN: 900 27 30 83 98 90	
	S 3000-0	EAN: 900 27 30 83 98 83	
<b>Item description:</b>	Profile rail for mounting KV sleeves for a form-fitting and positive connection		
<b>Material:</b>	Aluminium, drilled and undrilled		
<b>Dimension:</b>	W x H = 12 x 10mm, L up to 3000mm		
<b>Hole drilling:</b>	see rail listing		



## SYSTEM COMPONENTS

## KV RAIL



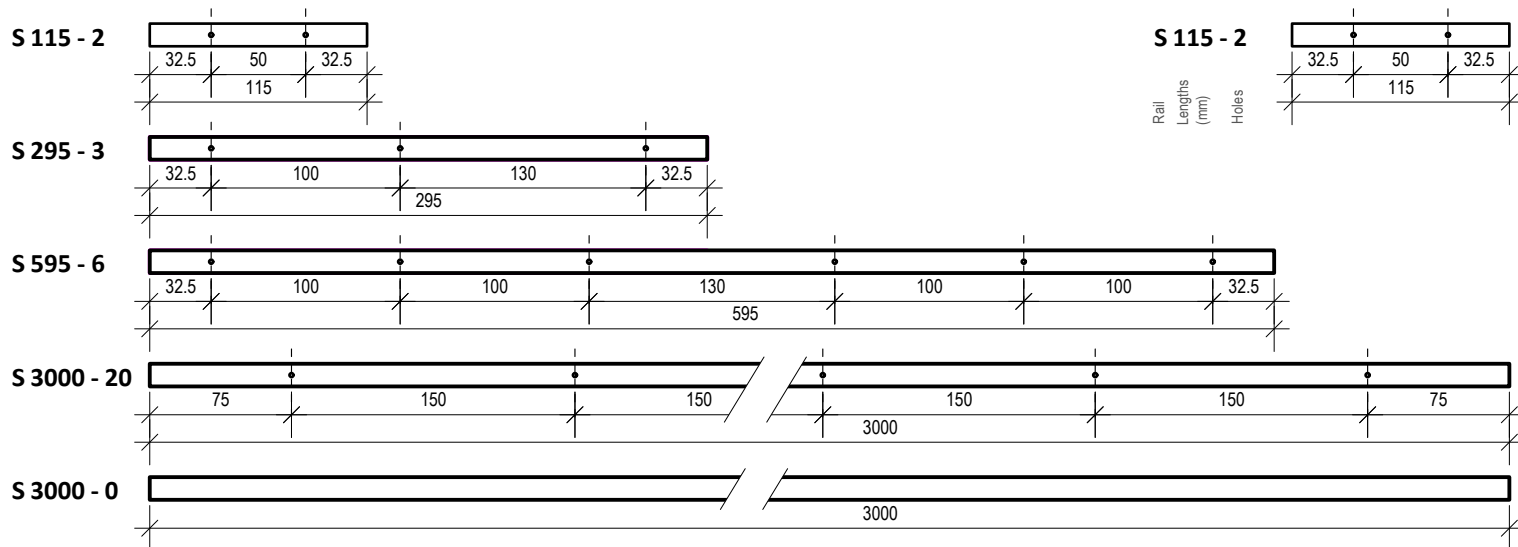
The **KV RAIL** are inserted into a dado in the sides of the shelves and engage the **KV SLEEVES** screwed onto the counterpart pieces creating a rigid connection..

To provide an invisible connection, the dado should not be milled through the front of the shelf.

In the case of solid wood shelves, the KV rail also would help prevent cupping and bowing.



Assembly video at: [www.keilverbinder.de](http://www.keilverbinder.de)



## SYSTEM COMPONENTS

## STANDARD RAIL LENGTH:

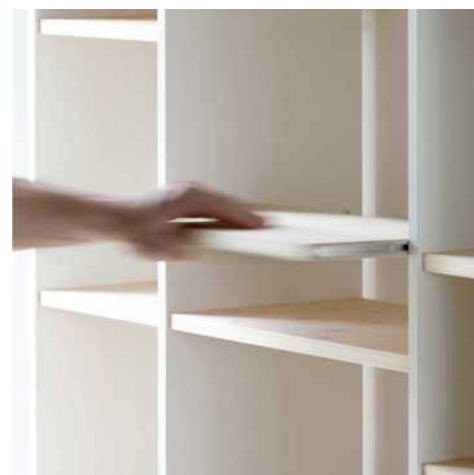
(Special lengths on request)



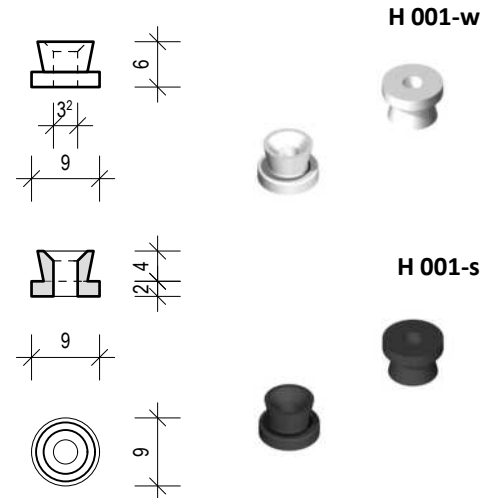
KV rail as a technical design element



KV rail concealed by a solid wood edge to the front



<b>Item name:</b>	KV sleeve		
<b>Item number:</b>	H 001-w	EAN: 90 027 30 84 06 43	
	H 001-s	EAN: 90 027 30 83 98 76	
<b>Item description:</b>	Dovetail sleeve for dovetail connector rail system <b>(KVS)</b> and dovetail connector direct system <b>(KVD)</b>		
<b>Material:</b>	POM, white and black		
<b>Dimension:</b>	L x W x H = 9 x 9 x 6mm		
<b>Holes:</b>	1 hole for screw 3mm		
<b>Areas of application:</b>	<ul style="list-style-type: none"> <li>- As a counterpart piece to the aluminium dovetail rail</li> <li>- For flat connections in dovetail pockets</li> <li>- For the KVD area, only with very dense, solid materials</li> </ul>		



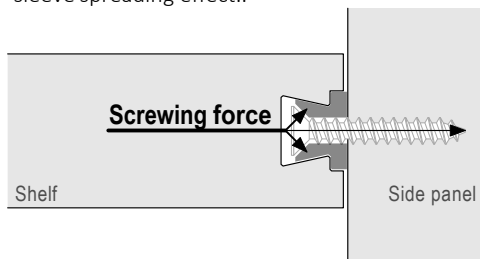
## SYSTEM COMPONENTS

## KV SLEEVE

### Note on sleeve tension:

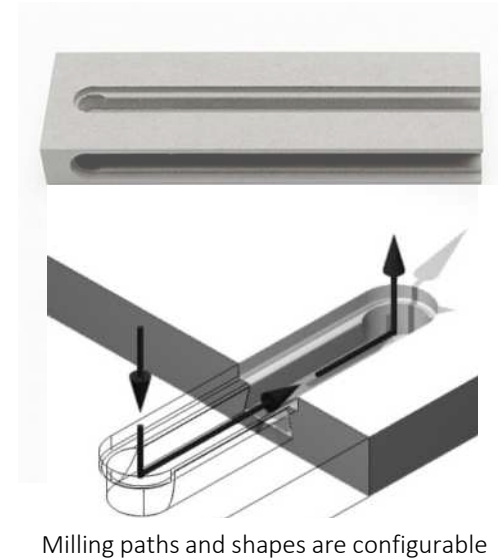
The firmer the screw on the dovetail sleeve is tightened, the harder it is to slide onto the shelf and remove it again, so the clamping effect is stronger.  
Caution: Overtightening can damage the sleeve.

It is recommended that the KV SLEEVES be installed carefully, with the final tightening of the screw done by hand to realize the full potential of the sleeve spreading effect..



KV sleeve for mounting in a milled KV pocket

Item name:	KV cutter		
Item number:	F 001	EAN: 40 409 32 13 19 80	
Item description:	Profile milling cutter for the <b>KVD</b> variant, for cutting into the edge or surface, such as KV pockets.		
Material:	Hard metal		
Shank diameter:	8 mm		
Shank length:	61 mm		



## SYSTEM COMPONENTS

## KV CUTTER



Ideal for nesting

The **KV CUTTER** is the basis for the KVD system variant.

With this very efficient form of furniture connection, the typical dovetail profile is milled directly into the material - on the edge or on the surface.

The material must be checked in advance for the suitability of this application.

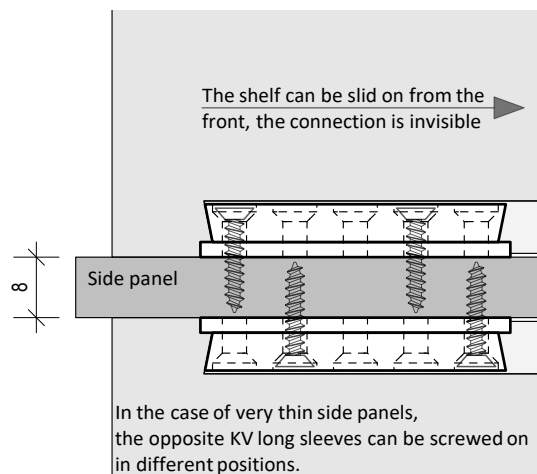
In addition to the linear connection milling, it is also possible to make numerous dovetail pockets and attachment millings. Corresponding CAD and CAM data are available for download.

The KV sleeve or the KV long sleeve can be used as the connecting counterpart piece. Suitable for routers, CNC, and router tables.

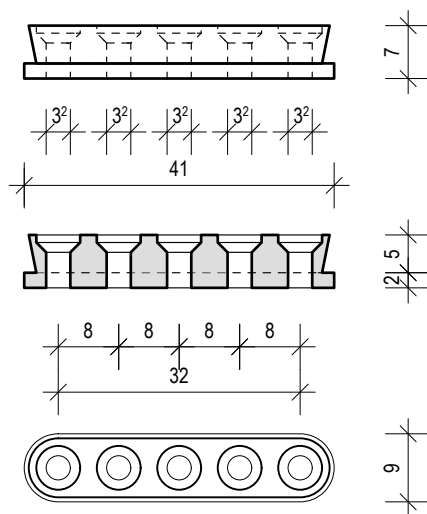
**F 001**



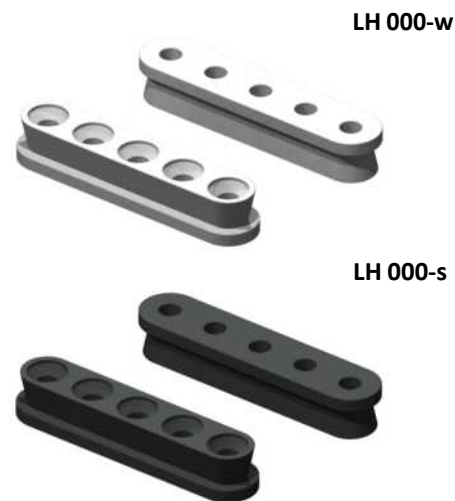
<b>Item name:</b>	KV long sleeve		
<b>Item number:</b>	LH 000-w	EAN: 42 700 02 15 91 36	
	LH 000-s	EAN: 42 700 02 15 91 43	
<b>Item description:</b>	KV long sleeve for <b>KVD</b> -system, without centring pin		
<b>Material:</b>	POM, white and black		
<b>Dimension:</b>	L x W x H = 41 x 9x 7mm		
<b>Holes:</b>	5 holes for 3mm screws without centring pin. Therefore, it can be freely positioned		
<b>Areas of application:</b>	- KVD-system with standard materials		
	- For flat connections with greater load transfer		



## SYSTEM COMPONENTS



## KV LONG SLEEVE



**Item name:** KV long sleeve

**Item number:** LH 001-w EAN: 42 700 02 15 91 67  
LH 001-s EAN: 42 700 02 15 91 74

**Item description:** KV long sleeve for **KVD**-system, with **1 centring pin**

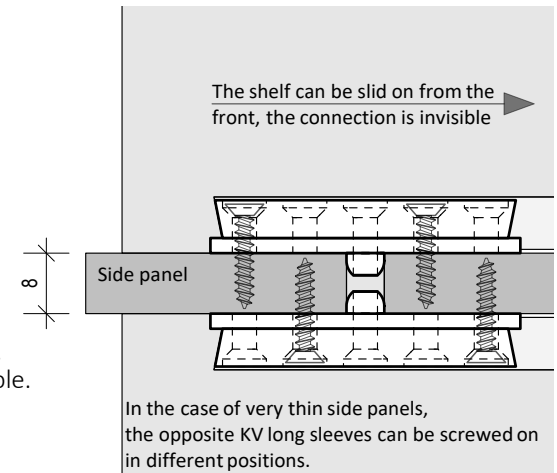
**Material:** POM, white and black

**Dimension:** L x W x H = 41 x 9 x 7mm

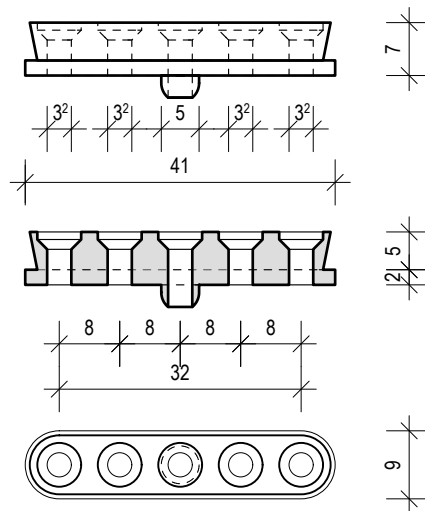
**Holes:** 5 holes for 3mm screws, with centring pin in the middle, KV long sleeve can be easily positioned. It can be rotatable.

**Areas of application:**

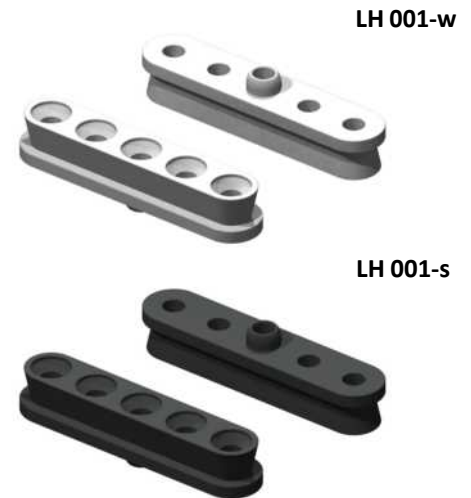
- KVD-system with standard materials
- For flat connections with greater load transfer



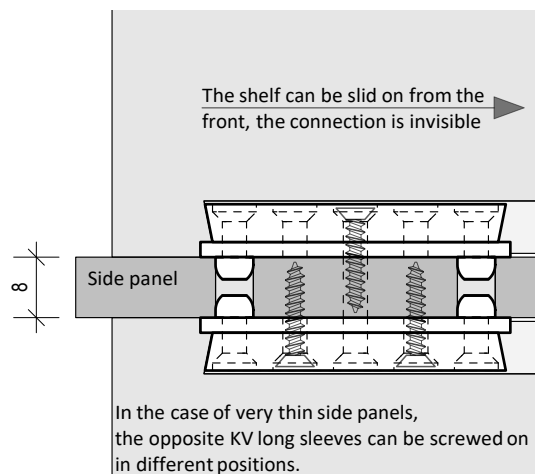
## SYSTEM COMPONENTS



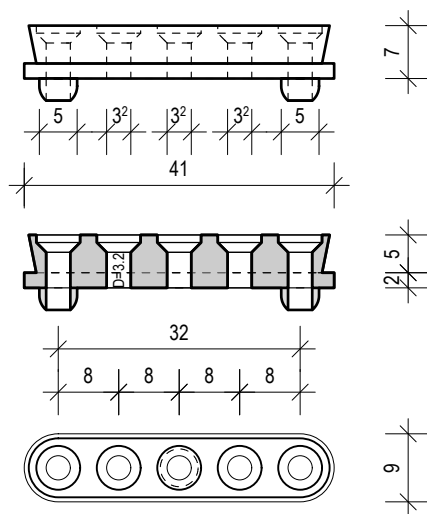
## KV LONG SLEEVE



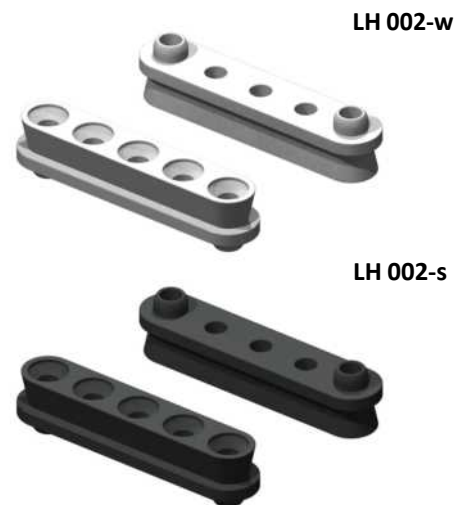
Item name:	KV long sleeve		
Item number:	LH 002-w	EAN: 42 700 02 15 91 81	
	LH 002-s	EAN: 42 700 02 15 91 98	
Item description:	KV long sleeve for <b>KVD</b> -system, with <b>2 centring pin</b>		
Material:	POM, white and black		
Dimension:	L x W x H = 41 x 9 x 7mm		
Holes:	5 holes for 3mm screws, with 2 centring pin for easy positioning in the 32 hole grid system.		
Areas of application:	- KVD-system with standard materials		
	- For flat connections with greater load transfer		



## SYSTEM COMPONENTS



## KV LONG SLEEVE



**Item name:** Drilling jig KV long sleeve

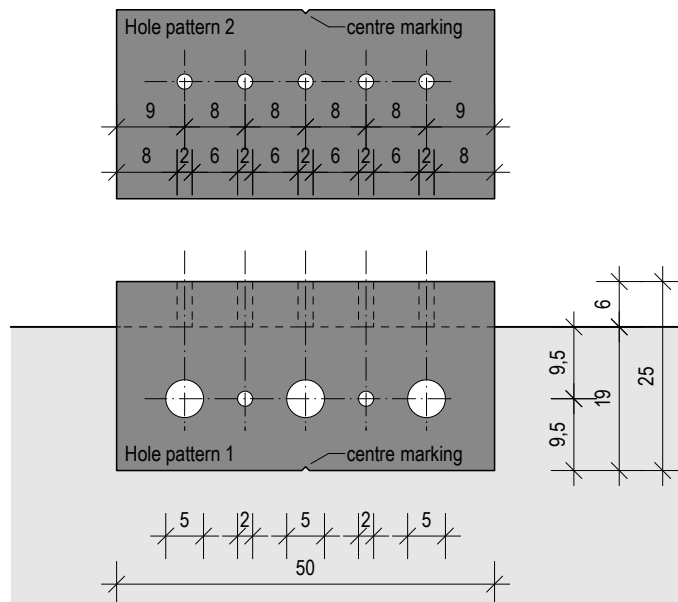
**Item number:** B 002-19 EAN: 42 700 02 15 91 05

**Item description:** The drilling jig makes it possible to easily and quickly create the pre-drilled holes for all 3 variants of the long sleeve. It is designed so that the holes will be in the center of a 19mm piece.

**Material:** Aluminum

**Dimension:** 25 x 25 x 50mm

**Drilling jig for:** LH 000, LH 001 und LH 002



## SYSTEM COMPONENTS

## DRILLING JIG KV LONG SLEEVE

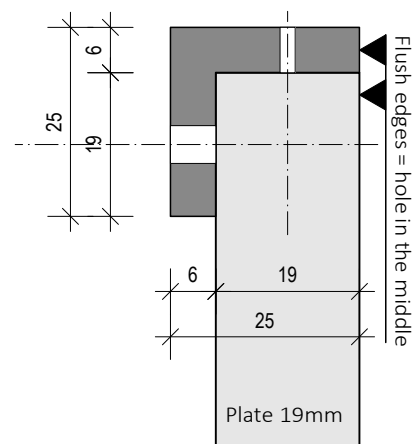
Drilling side for LH 000



Drilling side for LH 001 and LH 002



B 002-19



**TECHNOLOGY**





linear KV pocket - a simple straight milling

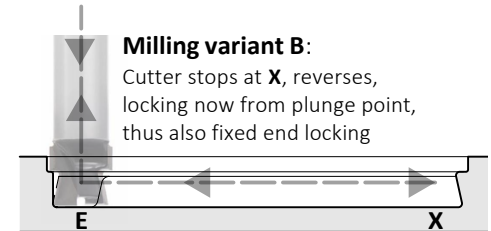
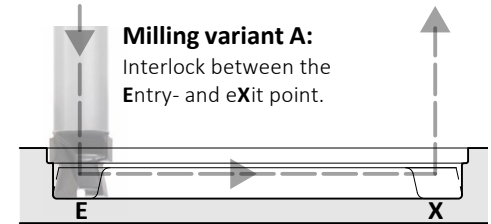
The KV cutter makes it easy to cut different shapes and sizes of KV pockets.

With the linear KV pocket, the milling cutter plunges into the material edge or surface.

The pocket can be milled to any length.

The counterpart piece can be locked between the entry and exit point.

Depending on the machine, the linear milling path can also be milled deeper in segments to achieve more tension in certain areas.

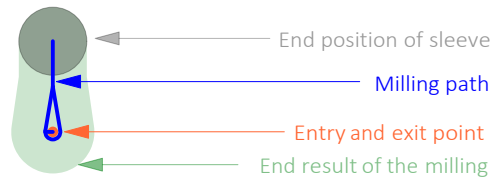


## TECHNOLOGY

## KV POCKET



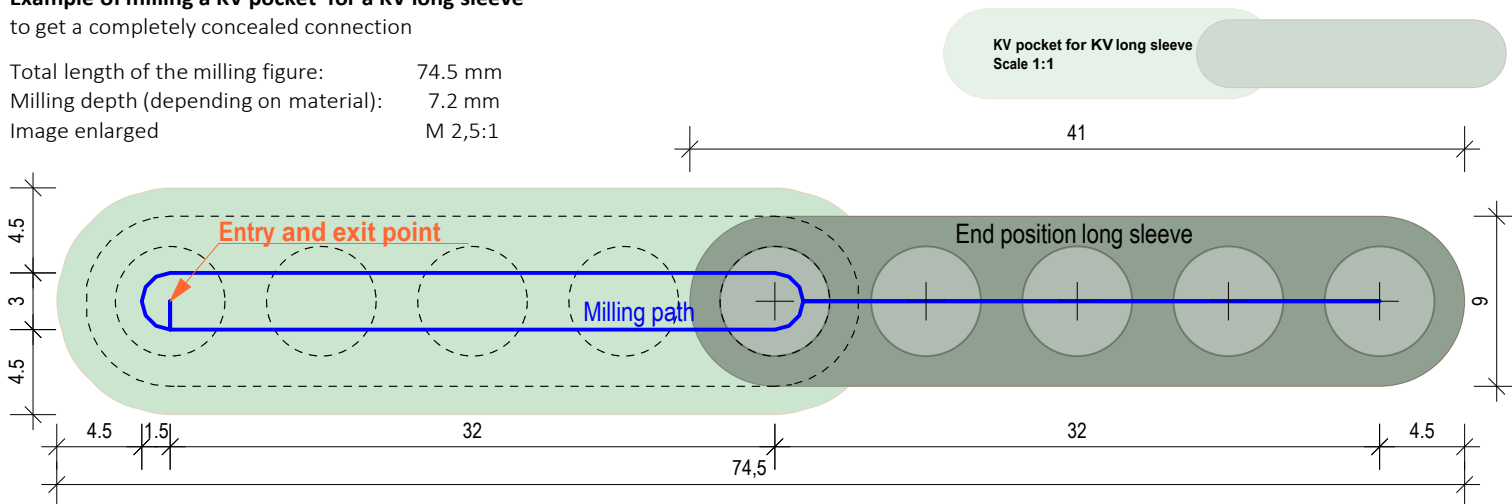
KV pocket for fastening drawer fronts



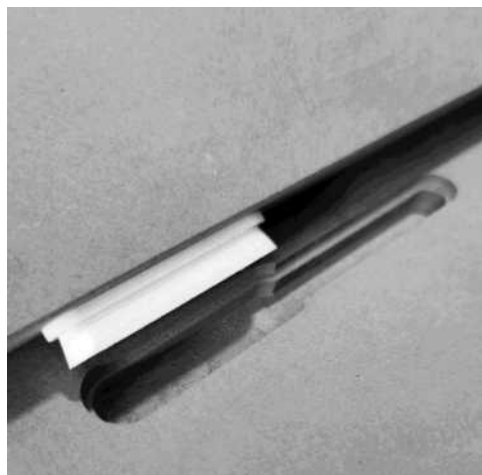
KV pocket for holding solid wood slats

### Example of milling a KV pocket for a KV long sleeve to get a completely concealed connection

Total length of the milling figure: 74.5 mm  
Milling depth (depending on material): 7.2 mm  
Image enlarged M 2,5:1



## TECHNOLOGY

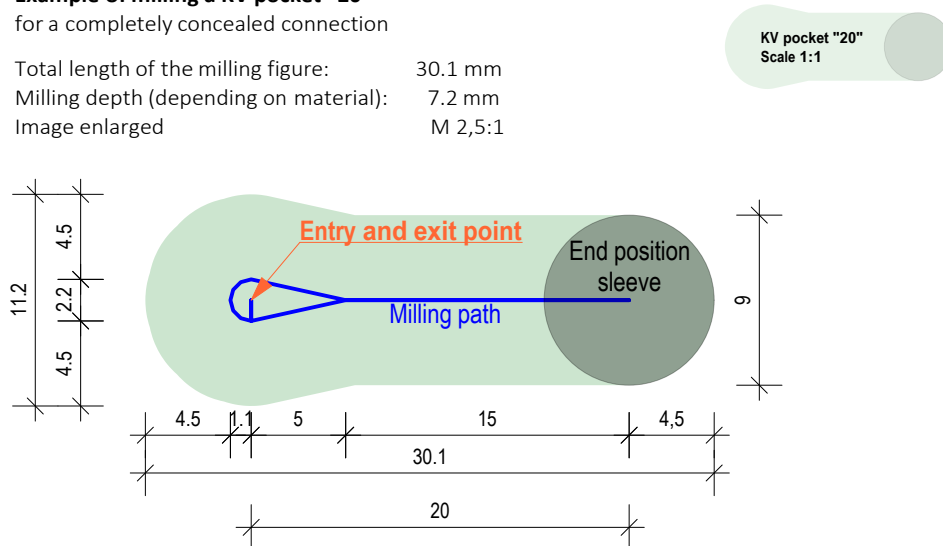


Assembly video see at: [keilverbinder.de](http://keilverbinder.de)

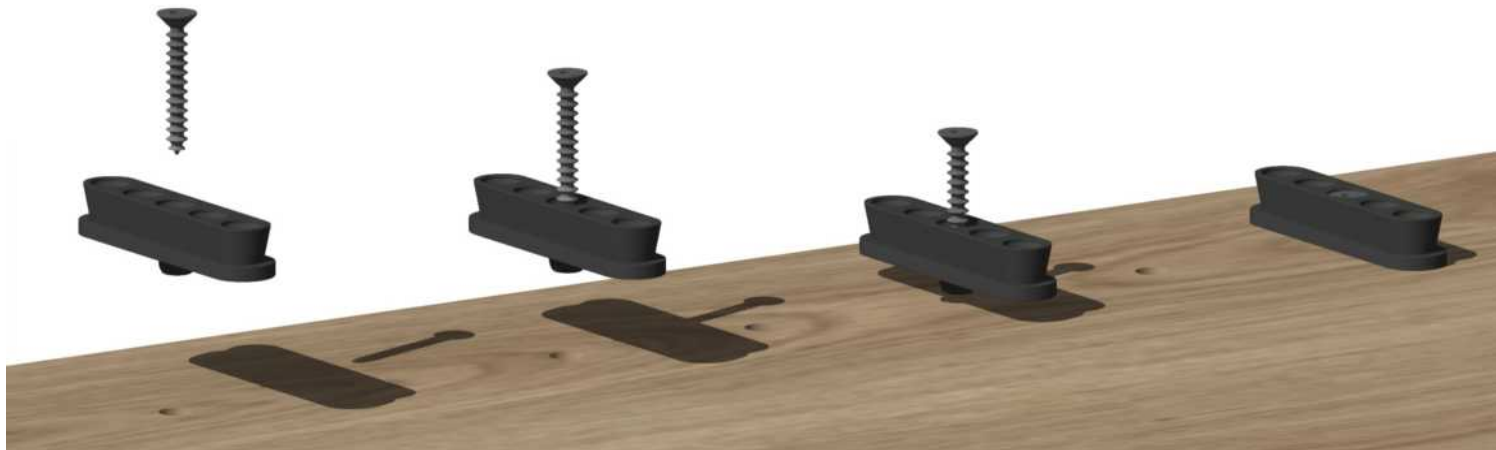
## MILLING KV POCKET

### Example of milling a KV pocket "20" for a completely concealed connection

Total length of the milling figure: 30.1 mm  
Milling depth (depending on material): 7.2 mm  
Image enlarged M 2,5:1



Long sleeve for holes in a typical 32mm distance, ideal for a detachable, damage-free connection or for repairing bulging furniture side parts.



## TECHNOLOGY

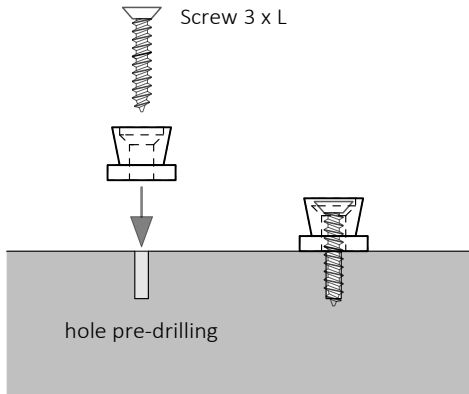
## KV SLEEVE FOR HOLE SERIES 32MM

In combination with a 5mm expansion sleeve, it is ideal for a detachable, damage-free connection or for repairing bulging furniture side parts.

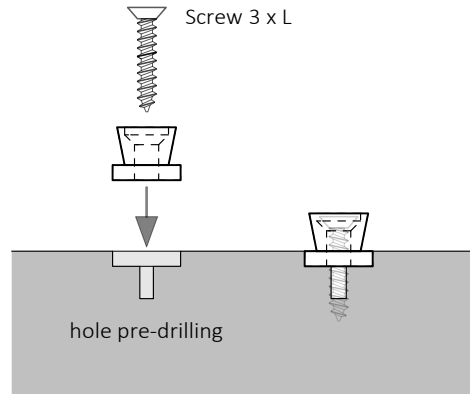


Videos on: [www.keilverbinder.de](http://www.keilverbinder.de) or [@keilverbinder](https://www.instagram.com/keilverbinder)

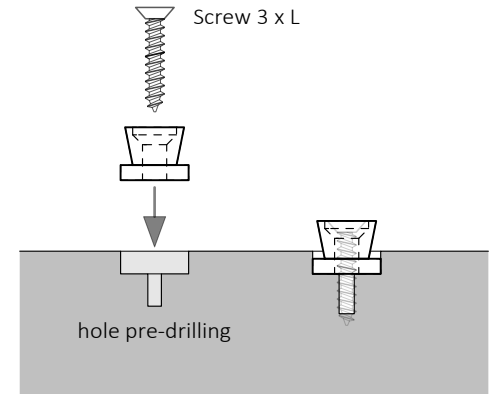
Standard sleeve attachment



Variant sleeve attachment



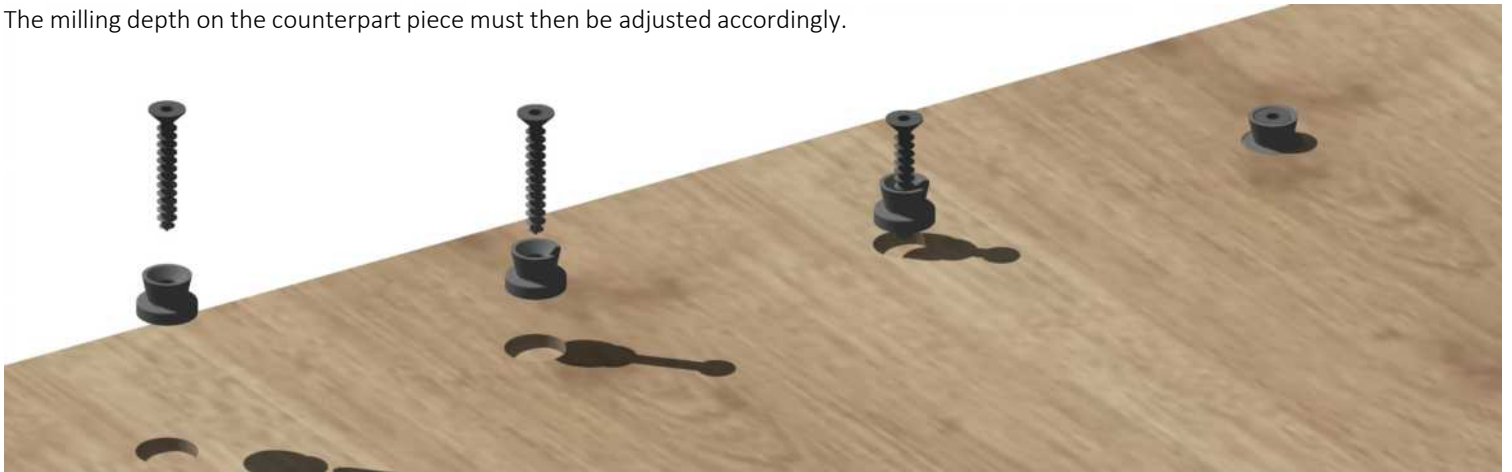
Alternative sleeve attachment



## TECHNOLOGY

## MOUNTING OPTIONS

As a positioning and assembly aid, the wedge sleeve can also be partially embedded in the panel material. The milling depth on the counterpart piece must then be adjusted accordingly.



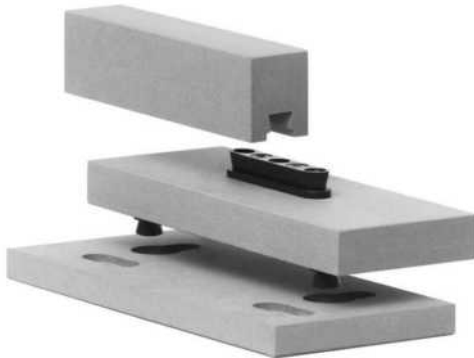
Application example: Milling to receive a lamella cladding

**SAMPLES**



The **SAMPLE KVD** best illustrates the numerous options of the KV connector. It not only comes with different connection options on the surface and the edge, it allows you to experience both the haptic and acoustic feedback of the system..

The sample can also be used by the fabricator as a template for the milling depth and fastening of the sleeves. It also shows how easily panels and drawer fronts as thin as 8mm can be invisibly connected by a mounting profile milled directly into the material and how they can also be dismantled without tools.



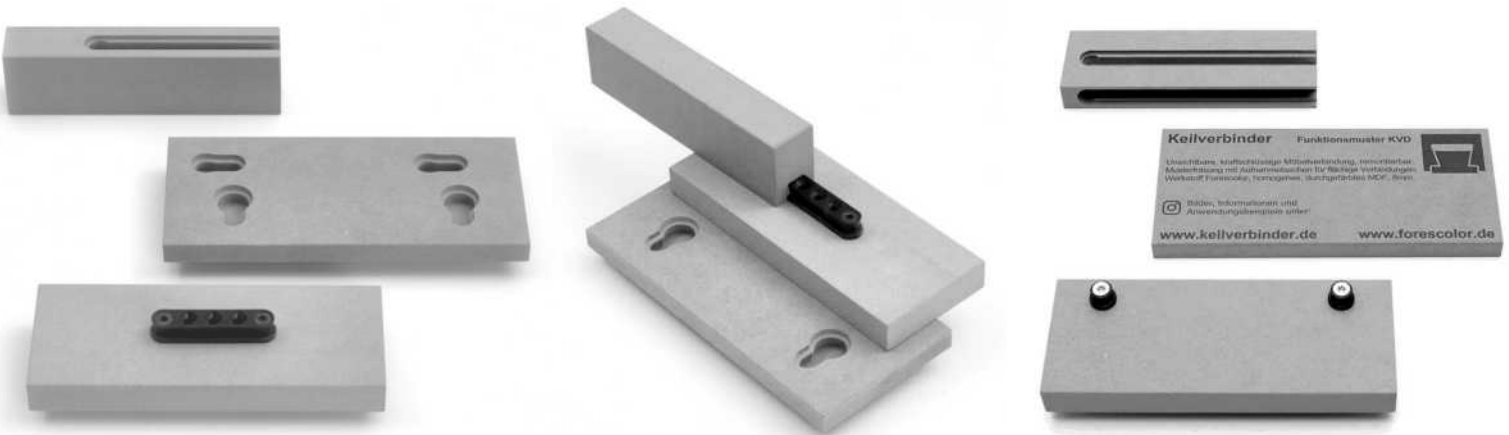
More informationen: [www.forescolor.de](http://www.forescolor.de)



## SAMPLES

## STANDARD SAMPLE KVD

**Request your free functional sample!**



The **SAMPLE KVD** best illustrates the numerous options of the KV connector. It not only comes with different connection options on the surface and the edge, it allows you to experience both the haptic and acoustic feedback of the system..

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## SAMPLES

## STANDARD SAMPLE KVS

**Request your free functional sample!**





Chipboard, 8mm, 12mm and 19mm



Compactboard, 8mm with oak, 19mm



Bioboard, 8mm

## SAMPLES

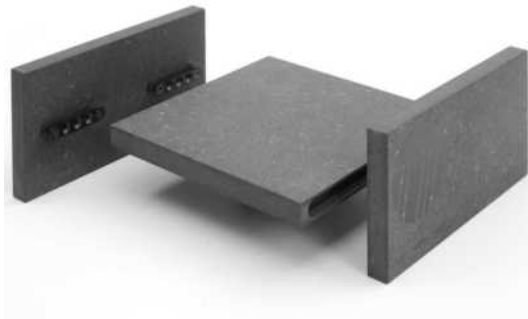
## FUNDERMAX MATERIALS



KV-milling in edge or surface



Sample for a invisible flat-pack connection with KV-long sleeve in 19mm chipboard



Invisible Shelf connection im 12mm material



Detachable plug-in connection, here for CDF 12mm special milling in forecolor



## SAMPLES

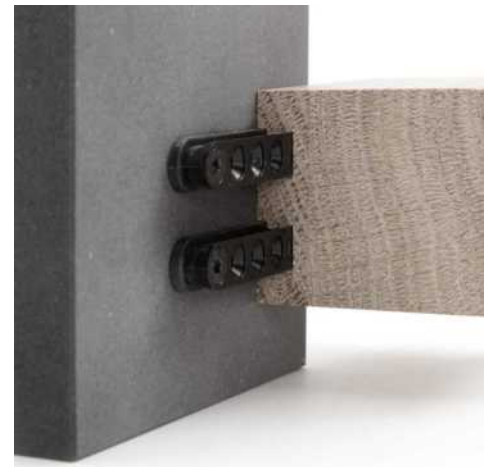


Connection metal and wood based material



Lightweight - industrial product

## SPECIALS



Double long sleeve - for a booth construction

## COOPERATION





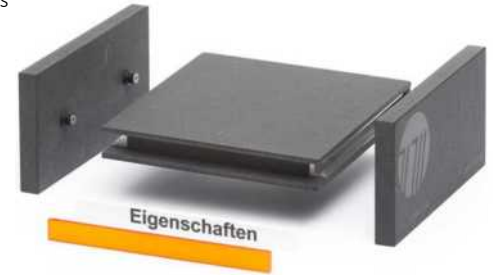
Detail with profiled inscription vein, made of oak

**7172** is a modular furniture system. A furniture piece that becomes your lifetime companion for different life situations and uses. A system that enables you to change it again and again in a playful manner.

The area of application ranges from shelves and room dividers to space-building structures like exhibition construction/shop fitting/office furnishing, etc.

The fundamental is formed by a circumferential groove and the invisible wedge connector fitting. This simple combination not only joins side parts and floors but also allows many other functions to be included.

Firstly, the defining feature of the system is the veins. You can change the look and function of the furniture in a wink of an eye. Furthermore, it can be integrated with stabilization and acoustic elements, guidance and labeling systems, different materials, surfaces, and fronts.



## COOPERATION

## 7172 SYSTEM 7172



More information and pictures: [www.7172.de](http://www.7172.de)



Basic construction



Freely positionable plug-in elements, acoustic felt



The Shaper Origin enables precise milling in **CNC quality** - everywhere, in the workshop as well as on the construction site.

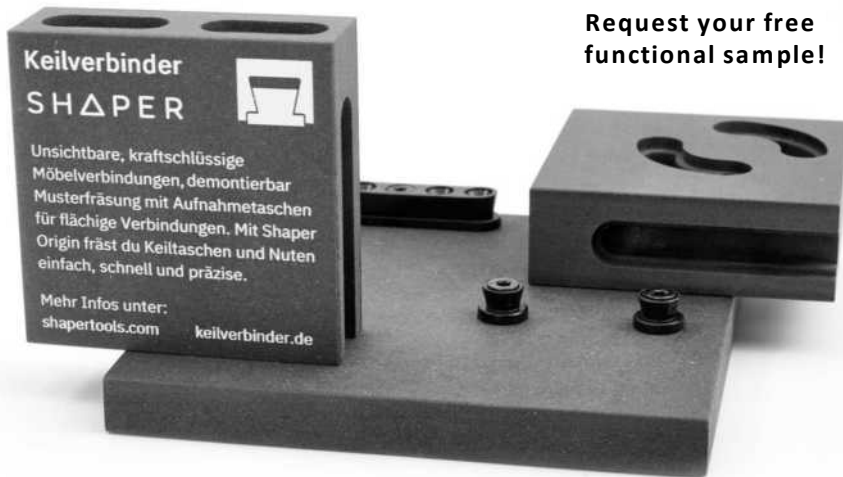
Complex milling geometries such as polygon wedge pockets can thus be done easily, quickly and with absolute precision.

Because Origin uses the panel surface as a height reference, milling depths are always 100% accurate regardless of panel thickness tolerances.

More information: [www.shapertools.com](http://www.shapertools.com)



## COOPERATION



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Free KV pocket milling for oak slats

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## DESIGN + PRODUCTION

[www.ackermannmbh.de](http://www.ackermannmbh.de)

**Ackermann GmbH**



**Holzfraese**

[www.cnc-holzfraese.de](http://www.cnc-holzfraese.de)

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