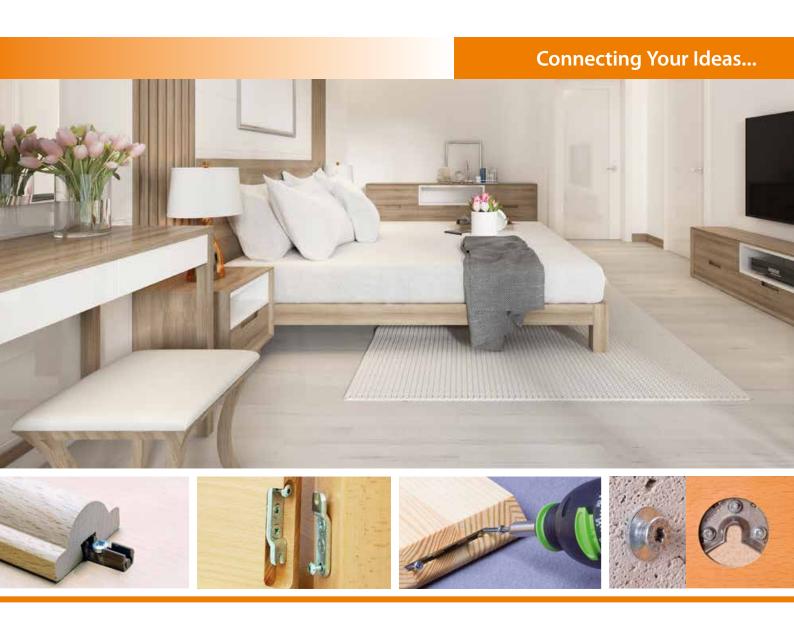
Connecting Systems

for modern furniture and architectural millwork







Friedrich Knapp CEO

Welcome to the World of KNAPP®!

As a manufacturer of patented connecting systems, we develop and produce high-quality products that are distributed worldwide. Our connecting systems convince and inspire you with the wide range of applications. Our comprehensive service helps you find the best, most efficient and innovative solution for the realization of your projects. On the following pages, you will find our connection systems for modern furniture and architectural millwork as well as light timber construction.

Our Customer Service

The KNAPP®-Team provides competent advice and excellent service for your projects.

- In Germany and Austria we offer full-coverage service by representatives on-site. You will find the right contact person easily and quickly.

 | www.knapp-connectors.com
- We offer full coverage customer service and technical support, Monday Thursday 8 a.m. to 4.30 p.m. and Friday 8 a.m. to 12 p.m. Central European Time. Find your nearest representative today.
- You can reach our office +43 (0)7474 / 799 10 or E-Mail: info@knapp-connectors.com www.knapp-connectors.com/contacts

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Select



Order



KNAPP® offers unique connecting systems for different industries, such as:

I Timber Frame Construction I Mass Timber Construction I Wood Curtain Walls I Off-site, Prefab, Modular Construction
I Door and Window manufacturing I Furniture and Architectural Millwork I Structural Glazing for Timber and Metal facades



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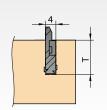


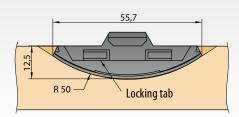
KNAPP®-ADHESIVE PU+	31
KNAPP®-ADHESIVE PM+	31

SUNNY

Sliding biscuit connector, plastic







Application: Case goods, furniture, architectural millwork, shop fitting, clamping device for miter joints and corners.

Benefits: Concealed, self-tightening biscuit connector with integrated locking tabs.

Suitable materials:

All softwoods and board materials without laminate surfaces.

Installation: Cut slot with biscuit joiner (#20) according to groove depth T. Knock-in both connector halves opposite of

one another, following the radius of the biscuit cut using hammer and insertion tool.

Accessories: see page 15 Insert tool | Art.-No. K049/E



1) Cut #20 biscuit slot



2) Insert



3) Knock in with the insert tool

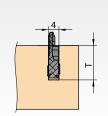


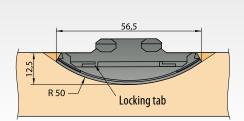
4) Assemble

SILVER

Slide-in biscuit connector, alloy-diecast







Application: Case goods, furniture, architectural millwork, shop fitting, clamping device for miter joints and corners.

Benefits: Concealed, self-tightening, demountable connector with optional integrated locking tabs.

Suitable MII softwood board materials.

Installation: Cut slot with biscuit joiner (#20) according to groove depth.

Accessories: see page 15 Insert tool | Art.-No. K049/E



1) Cut #20 biscuit slot



2) Engage locking tabs (optional)



3) Insert, knock in



4) Knock in with the insert tool



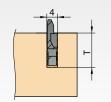
5) Assemble

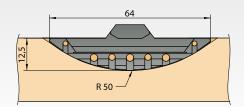
CHAMP

Slide-in biscuit connector, glass fiber reinforced plastic

Art.-No. K023







Tip: Moisten surface before gluing if wood is very dry.

Application: Case goods, furniture, architectural millwork, shop fitting, clamping device for miter joints and corners..

Benefits: Concealed, self-tightening, demountable.

Suitable All wood and board materials.

Cut slot with biscuit joiner (#20) according to groove depth T.

Installation: Apply KNAPP®-ADHESIVE PU+ into slot and insert connector halves.

Accessories: KNAPP®-ADHESIVE PU+ | Art.-No. Z011 see page 31



1) Cut #20 biscuit slot



2) Glue using KNAPP®-ADHESIVE PU+



3) Insert



4) Position with template



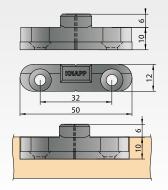
5) Assemble

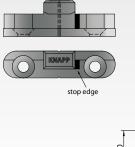
CHICO

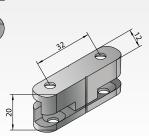
Slide connector, alloy-diecast

Art.-No. K030









Application: Heavy furniture, case goods, panels

Benefits: Concealed, self tightening, demountable with integrated stop.

Suitable

materials: All wood and board materials.

Installation: Cut mortise with plunge router or CNC machine and mount with CS-screws $\emptyset = 4,5$ mm.

Mounting: Screw in with CS-screws $\emptyset = 4.5$ mm.



1) Route mortise



2) Insert



3) Screw in



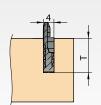
4) Assemble

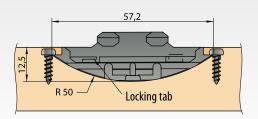
METAL

Slide-in biscuit connector, alloy-diecast

Art.-No. K026







Application: Case goods, furniture, architectural millwork, shop fitting, door frames.

Concealed, self-tightening, demountable connector with optional integrated locking **Benefits:**

Suitable All wood and board materials. materials:

Cut slot with biscuit joiner (#20) according to groove depth T. Installation:

Insert both connector halfs into the biscuit cuts and mount by means of PH-screws.

Mounting: Screw in with PH-screws.

PH-screw 3x13 mm | Art.-No. Z600 **Accessories:** PH-screw 3x25 mm | Art.-No. Z601 see page 15





1) Cut #20 biscuit slot



2) Engage locking tabs (optional)



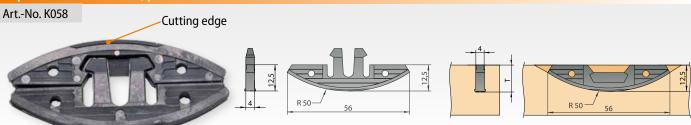
3) Screw in



4) Assemble

FAST

Clip-in biscuit connector, plastic



Case goods, furniture, architectural millwork, face frames, door and window casing, Application:

clamping device for miter joints and corners.

Benefits: Concealed, self-tightening, demountable connector, immediately load bearing.

Suitable materials:

All softwoods and board materials without laminated surfaces.

Cut slot with biscuit joiner (#20) according to groove depth T. Knock-in both connec-Installation: tor halves following the radius of the biscuit cut using hammer and insertion tool.

Optionally, KNAPP®-ADHESIVE PU+ may be used prior to insertion for a stronger hold.

Accessories: Insert tool | Art.-No. K049/E see page 15



1) Cut #20 biscuit slot



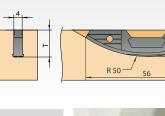
2) Insert



3) Knock-in with insertion tool



4) Assemble

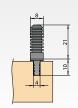


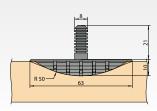
CLIPS

Clip-in biscuit connector, plastic

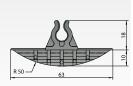












Tip: Moisten surface before gluing if wood is very dry.

Application: Cabinets, case goods, removable panels, toe kicks, miter joints, shop fittings.

Benefits: Self-tightening, demountable connector, adjustable (with or without gap).

Suitable materials:

All wood and board materials.

Cut slot with biscuit joiner (#10). Installation:

Apply KNAPP®-ADHESIVE PU+ into biscuit cut and insert connector halves.

Accessories: see page 31

KNAPP®-ADHESIVE PU+ | Art.-No. Z011













2) Glue 3) Insert

4) Assemble

KOMBI

KOMBI - biscuit connector, alu/zinc diecast

Art.-No. K614 Art.-No. K615

Application: Exhibition, architectural millwork, wall/facade paneling and cladding.

Benefits: Concealed, self-tightening biscuit connector

Suitable materials:

All wood and board materials

Installation:

Cut slot with biscuit joiner (#10) adjusting depth to 10 mm.

install with PH-screws Ø= 3x25 mm or glue with KNAPP-ADHESIVE PU+.

Accessories: see page 15

PH-srew 3x25mm | Art.-No. Z601, CS stainless steel screw A2 4,5x35 mm | Art.-No. Z409, KNAPP® Adhesive PU+ (p. 31) | Art.-No. Z011





1) Positioning



2) Mount KOMBI bracket with screws



3) Simply hook in the components



4) Can be detached if needed

DUO 30, DUO 35

Panel / Hook-in Connectors made of steel

Benefits:

- Easy to mount, concealed and immediately load bearing
- | Shallow drilling depth only 3 mm
- Available in $\emptyset = 30$ and 35 mm
- Optionally mL / oL (with / without sideways tolerance)
- Installed with standard CS-screws or EURO-screws
- Latch the connection with optional locking clip

DUO 30 mL

DUO 30 oL

Art.-No. K070







CS-screws 3,5x16 mm (not included)



DUO 35 mL

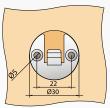
DUO 35 oL

Art.-No. K061

Art.-No. K062





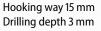


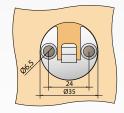


Installation example:

Mounting handrail

Installation example:Mounting on wood door leaf.







Optimized for CNC-processing: Euro-screws 6x10 mm





Application: Facades and windows, staircases and handrails, cabinet end panels, door and window casing.

Benefits: Concealed, self-tightening, demountable connector which allows shrinkage and expansion moving

(mL = with tolerances) or for exact placing (oL = with no tolerances).

Drill 3mm deep holes using the KNAPP® Forstner Bit $\emptyset = 30/35$ mm using drilling jig or with CNC equipment.

Mount DUO 30 with (suggested) CS-screws 3,5x16 mm / DUO 35 with (suggested) Euro-screws 6x10 mm.

Screws length depends on application.

Suitable materials: All kinds of wood and particle boards.

Accessories: KNAPP® Forstner Bit (Ø = 30/35 mm, adjustable depth gauge) | Art.-No. Z070 / Art.-No. Z071

Accessories: KNAPP® Forstner Bit (Ø = 30/35 mm, adjustable depth gauge) | Art.-No. Z070 / Art.-No. Z071

Center punch DUO 30/35 | Art.-No. K071 / Art.-No. K069, Handrail punch DUO 30 | Art.-No. K075 see page 15

Adjustable boring template DUO 30/35 | Art.-No. K563



Installation:

For instruction manuals, .DXF drawings for DUO 30, UNO 30 as well as your personal consultant in your area, please visit: www.knapp-connectors.com/downloads

Installation DUO 30



1a) Drill with jig



1b) or according to mark



Mark counter part with center punch



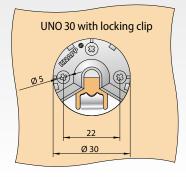
3) Install with screws

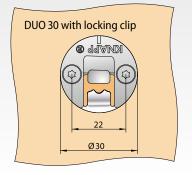
Locking clip

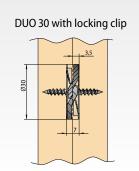
Optional spring steel locking clip for DUO 30 and UNO 30

Art.-No. K121









Mounting: Insert beneath DUO 30 or UNO 30 bracket prior to mounting with screws.

Benefits: Locking clip holds up to 24 kg (failure load approx. 73 kg).

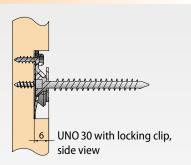
UNO 30

Stainless steel hook connector with optional locking clip

Art.-No. K120 UNO 30 Set UNO 30 UNO 30

PH-screw A2 3x13 mm CS-holding screw A2 5x50 mm

Additional screw lengths available upon request.



Application: Paneling, facades, handrails, furniture (use with or without locking clip).

Benefits: Concealed, self tightening, demountable connector for 30 mm drills.

Installation: Drill a 7mm deep hole using the KNAPP Forstner Bit $\emptyset = 30$ mm using center

punch and drilling jig or with CNC equipment.

Suitable materials:

All wood materials including concrete and drywall with use of wall anchor.

Accessories: KNAPP® Forstner Bit ($\emptyset = 30 \text{ mm}$, with adjustable depth stop) | Art.-No. Z070 Center punch UNO 30 | Art.-No. K073

Adjustable boring template UNO 30 | Art.-No. K563, Locking clip | Art.-No. K121





1a) Drilling with jig



1b) or according to mark



2) Mount with screws



3) Transfer mark with center punch



4) Attach holding screw

TUCK

Dowel, spring steel

Art.-No. Z5052 Art.-No. Z5053 Art.-No. Z5055 Art.-No. Z5055B Art.-No. Z5052A

6x25 mm

8x35 mm

10x32 mm

10x16 mm

10x28 mm

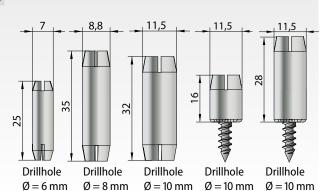








TUCK for screwing



Application: Cabinets, case goods, architectural millwork, shop fitting. Anywhere standard wood dowels are used.

Suitable materials: All kind of wood materials (solid and composite).

Benefits: Concealed, self-tightening compression dowel, immediately load bearing. Installation: Dowel drilling jig, Doweling joiner, CNC drilling. Insert or screw on the TUCK.



1a) Drill with doweling machine



1b) or doweling joiner



2a) Knock in



2b) or screw



3) Attach holding screw

MILLER DOWEL

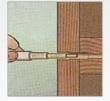
The wooden dowel for decorative joints







1) Drill



2) Apply wood glue and position



3) Knock in

Application: For connecting ecologically decorative furniture

Benefits: Easy installation, ecological and sustainable, decorative design

Installation: Drill with custom stepped drill bit, apply adhesive in borehole and insert dowel.

Suitable Solid wood, plywood, high gloss-MDF materials:

Accessories: MILLER® TruFit Drill Bit | Art.-No. Z01D, Z02D, Z03D (check online-store).





Frame connections



Case goods



Load bearing connection

KNAPP®-DOWEL

Plastic dowel

Benefits:

- | Effective prefabrication doweling jig or automatic doweling machine
- | Fast installation connection can be used immediately after insertion
- Design channel along dowel allows for smooth distribution of adhesive and prevents surface from bulging
- No shrinking or swelling will occur, thus no risk of breaking or splitting as with wooden dowels
- Weather resistant high quality polyacetal (POM) plastic for interior and exterior use
- Strong hold through additional bonding with KNAPP®-ADHESIVE PU+

Center point for marking the hole on counter-part.

High strength and weather-resistant plastic.

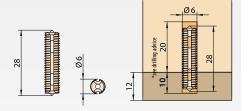
Holes and elongated channel provide firm anchoring points when used with KNAPP®-Adhesive PU+, giving a solid and permanent joint.

Threaded design allows for quick installation and unscrewing of KNAPP®-Dowel if necessary.

KNAPP®-DOWEL 6 mm

Art.-No. K066 6x28 mm



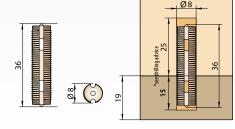


Info: Moisten the surface of very dry wood before gluing.

KNAPP®-DOWEL 8 mm

Art.-No. K067 8x36 mm







www.knapp-connectors.com/dowel

Application: Case goods, furniture, architectural millwork and shop fitting, windows. Wherever wood dowels can be used.

Benefits: UV-resistant, self-tightening dowel.

Drill holes with doweling jig or doweling joiner. Insert by hand with hammer or automated dowel insertion machine. Installation:

Optionally, insert adhesive before inserting dowel.

Suitable materials: All kinds of wood materials (solid and composite).

Accessories: KNAPP®-ADHESIVE PU+ | Art.-No. Z011 see page 31

KNAPP®-DOWEL

Installation



1a) Drill with doweling machine



1b) or doweling joiner



2) Glue with KNAPP®-Adhesive PU+



3) Knock in



4) Assemble



QUICK-SET



Application: Furniture, architectural millwork, shop fitting. Wherever wooden dowels are used.

Benefits: Concealed, self-tightening, no glue necessary.

Drill holes with doweling jig or doweling joiner and insert by screwing in threaded stud. Insert plastic sleeve on Installation:

counter part and insert threaded stud into plastic sleeve.

Suitable materials: All kind of wood boards (solid and composite).











machine

Art.-No. Z339

1a) Drill with doweling 1b) or doweling joiner

2) Screw-in metal stud

3) Insert plastic sleeve

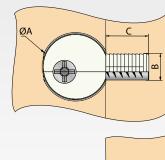
4) Assemble

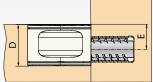
Zipbolt™ Fastfit

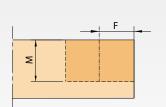
One-piece nesting connectorfor material ≥ 16 mm











Drilling depth M	Ø A	В	C	D	E	F
13 mm	20 mm	8 mm	12,5 mm	12,5 mm	7,5 mm	min. 9,5 mm

Application: Cabinets, case goods, architectural millwork and shop fitting.

Benefits: One-piece nesting connector.

Drill dowel hole with drilling hand held machine or CNC.

Installation: Insert into 20 mm nest hole and insert into drill holes of counter part.

Tighten components with #2 Phillips screw driver.

Suitable materials:

Wood panels, composite materials.



KLICK

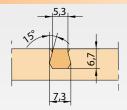
Dovetail snap-in connector, plastic





7,3





Application: Concealed mounting of moldings, trims and mitered corners as well as gluing aid.

Benefits: Concealed, self-tightening, demountable.

Installation: Use a router table or CNC to make dovetail route and snap KLICK into route.

Can also be used in combination with KLICKpro.

Suitable materials: For all solid wood, wood based panels and plastic materials.

Accessories: KLICK Dovetail Router Bit with $\emptyset = 8$ mm shank | Art.-No. K046/F,

Accessories: $\emptyset = 6 \text{ mm shank} \mid \text{Art.-No. K045/F}; \ \emptyset = 6,35 \text{ mm/ 1/4" shank} \mid \text{Art.-No. K048/F},$ see page 15 $\emptyset = 6 \text{ mm shank} \mid \text{Art.-No. K045/F}; \ \emptyset = 6,35 \text{ mm/ 1/4" shank} \mid \text{Art.-No. K048/F},$

 $\emptyset = 12,7 \text{ mm}/1/2$ " shank | Art.-No. K047/F.



Installation











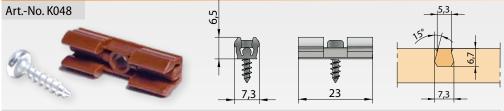
1) Route groove

2) Insert

3) Position

sKLICK

Dovetail snap-in connector for screw mounting, plastic



Application: For concealed mounting of filler panels, covers and moldings. **Benefits:** Self-tightening, demountable connector for any angles 0-90°.

Use a router table or CNC to make dovetail route.

Installation: Attach with PH-screw 3x13 | Art.-No. Z600, and snap sKLICK into the route.

Can also be used in combination with KLICKpro.

Suitable materials: For all solid wood, wood based panels and plastic materials.

KLICK Dovetail Router Bit with $\emptyset = 8$ mm shank | Art.-No. K046/F, Accessories:

Accessories: $\emptyset = 6 \text{ mm shank} \mid \text{Art.-No. K045/F}; \quad \emptyset = 6,35 \text{ mm/ 1/4" shank} \mid \text{Art.-No. K048/F},$ see page 15

 $\emptyset = 12,7 \text{ mm} / 1/2 \text{" shank } Art.-No. K047/F.$



Installation







2) Mount with screw



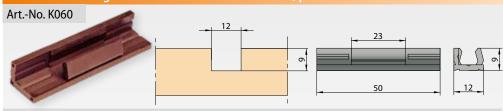
3) Position



4) Snap-in

KLICKpro

Dovetail receiving connector for KLICK and sKLICK, plastic



Application: For concealed mounting of filler panels, covers and moldings.

Benefits: Concealed, self-tightening dovetail housing suitable for KLICK and sKLICK.

Cut either groove or rebate (9x12 mm by using a spindle moulder or CNC) or

Installation: install KLICKpro surface mounted. For use with KLICK or sKLICK. Fixed KLICKpro

by either screwing, nailing or gluing.

Suitable For all solid wood, wood based panels and plastic materials. materials:



Installation







2) Mount with screws



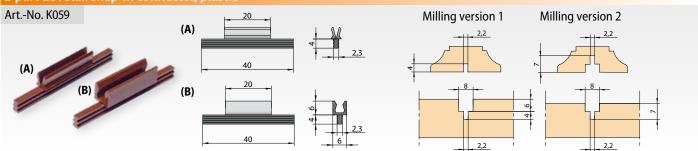
3) Snap together



Combination with KLICKpro

miniKLICK

2-part dovetail snap-in connector, plastic



Application: For concealed mounting of small moldings and glazing beads e.g. interior doors.

Benefits: Concealed, self-tightening dovetail connector.

Installation: Make groove with spindle moulder and cutting saw blade. Apply KNAPP-ADHESIVE PU+ glue into groove.

Suitable materials: For all solid wood, wood based panels and plastic materials.

miniKLICK grooving saw blade 120 mm, Ø = 30 mm drillhole | Art.-No. Z065 (See page 15). **Accessories:**

Insert tool miniKLICK | Art.-No. K068

KNAPP®-ADHESIVE PU+ | Art.-No. Z011 (See page 31)



Installation



1) Route groove



2) Insert



3) Snap together



Option: Glue with

KNAPP®-Adhesive PU+



Accessories

Insert tool

Art.-No. K049/E To position SUNNY, SILVER, and FAST.



Center punch DUO 30/35

ArtNo. K071	Center punch DUO 30.

Art.-No. K075 Handrail punch DUO 30.

Art.-No. K069 Center punch DUO 35 with $\emptyset = 5$ mm for pre-drilling holes for Euro-screws.



KNAPP® Forstner Bit $\emptyset = 30 \text{ mm} / 35 \text{ mm}$

ArtNo. Z070	KNAPP® Forstner Bit for DUO 30 and UNO 30	(Ø = 30 mm)) with adjustable depth stop.

Art.-No. Z072 KNAPP® Forstner Bit for DUO 30 and UNO 30 (Ø = 30 mm) with adjustable

depth stop and adjustable centering point.

Art.-No. Z071 KNAPP® Forstner Bit for DUO 35 ($\emptyset = 35$ mm) with adjustable depth stop.



Adjustable drilling jig

Art.-No. K563 Drilling jig suitable for KNAPP® Forstner Bit 30 and 30mm

to drill holes for DUO 30, DUO 35 and UNO 30.



Center punch UNO 30

Art.-No. K073 To transfer center mark to opposing wood component when using UNO 30.



KLICK Dovetail Router Bit and 2 Flute Straight Router Bit

ArtNo. K045/F KLICK Router Bit with $\emptyset = 6$ mm shank.(To rout dovetail groove for KLICK and s	sKLICK)
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Art.-No. K046/F KLICK Router Bit with $\emptyset = 8$ mm shank. (To rout dovetail groove for KLICK and sKLICK)

Art.-No. K048/F KLICK Router Bit with Ø = 6,35 mm shank. (To rout dovetail groove for KLICK and sKLICK)

Art.-No. Z066 2 Flute Straight Router Bit $\emptyset = 15$, Length = 25 mm with $\emptyset = 8$ mm shank (CONTRA 800, DUO-System)



miniKLICK Grooving Saw Blade

Art.-No. Z065 miniKLICK Grooving Saw Blade $\emptyset = 120$ mm, spindle $\emptyset = 30$ mm.

(For routing of the groove for miniKLICK connector).



PH-screws and CS-screws

ArtNo. Z600	PH-screw 3x13 mm (for METAL	, UNO 30 and sKLICK).

Art.-No. Z601 PH-screw 3x25 mm (for METAL).

Art.-No. Z409 CS-stainless steel screw A2 4,5x35 mm (to install KOMBI)

Art.-No. Z631 PH-stainless steel screw 3x13 mm (to install sKLICK)



KNAPP® Online Store | Order around the clock



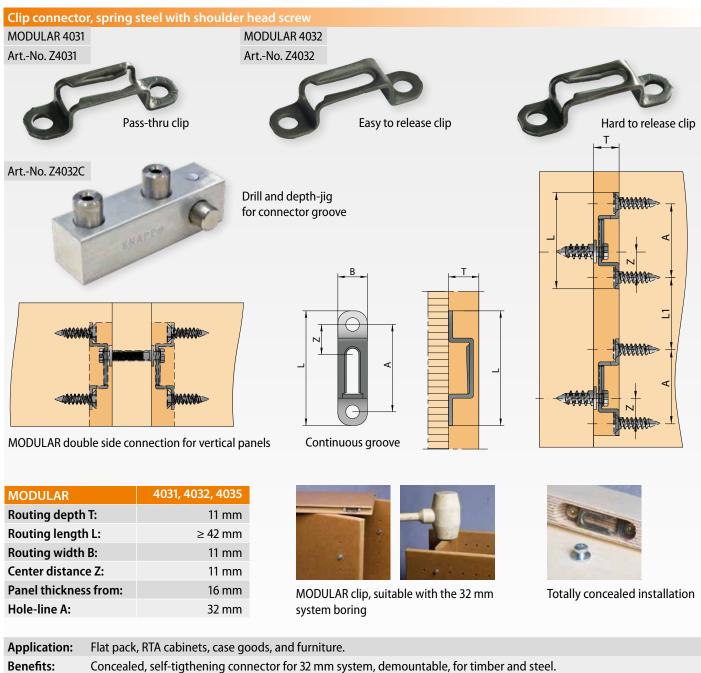


Our online store gives you the flexibility to order at any time. After a quick registration, you can immediately place your order. Finding the most fitting connecting system for your application is only a mouse click away!*

www.knapp-connectors.com/online-store

* in Germany and Austria. Not available Switzerland, Poland and America.

MODULAR



Make goove with spindle moulder, plunge router, CNC equipment.

Installation: Pre-drill with drill-jig and install clips with PH- or CS-screws $\emptyset = 4.5$ mm (length depending on application).

Shoulder head screw engages with the clip when sliding them into each other.

Suitable

For all solid wood, wood based panels and plastic materials from 16 mm thickness up. materials:

Accessories: Drill and depth-jig | Art.-No. Z4032C

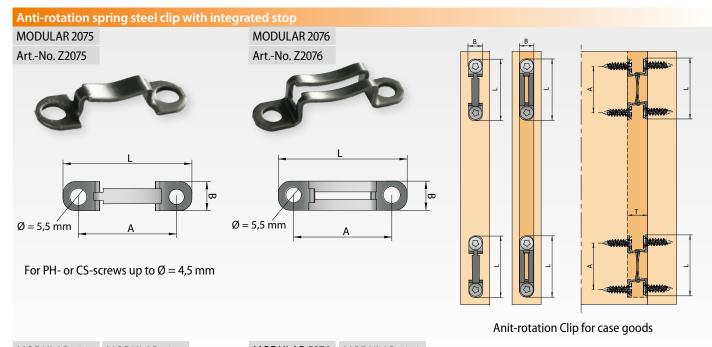
MODULAR - shoulder head screw

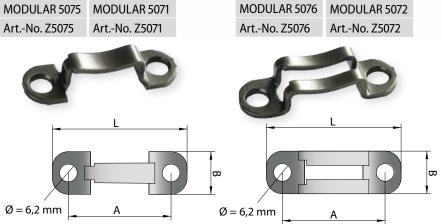
Shoulder head screws		
MODULAR 2055	MODULAR 2155	MODULAR 2055
ArtNo. Z2055	ArtNo. Z2155	ArtNo. Z5068
		Signal and the second
Thread length: 13 mm	16 mm	32 mm

Double side connection

Shoulder head screws A	М 4
MODULAR 2069	MODULAR 2066
ArtNo. Z2069	ArtNo. Z2066
15 mm	16 mm

MODULAR





For PH- or CS-screws up to $\emptyset = 5 \text{ mm}$

MODULAR	2075, 2076	5075, 5076, 5075, 5076
Routing depth T:	14 mm	12 mm
Routing width B:	10 mm	13,5 mm
Routing length L:	42 mm	42 mm
Panel thickness from:	16 mm	19 mm
Hole-line A:	32 mm	32 mm

Frame joint with MODULAR anti-rotation clip.

Application:	Flat pack case goods and furniture.
Application:	rial back case doods and furniture.

Benefits: No rotation, concealed, self-tightening connector for 32 mm system, demountable.

Make groove with spindle moulder, horizontal router table, CNC equipment. Installation:

Pre-drill with drill-jig and install clips with PH or CS-screws $\emptyset = 4.5$ mm (length depending on application).

Suitable materials: For all solid wood, wood based panels and plastic materials from 16 mm thickness up.

Installation



1) Route groove











2) Check depth

3) Pre-drill

4) Install clip

5) Place PH-screw

CONTRA 800

Connector for case goods

Art.-No. K800/B





Screw recommendation

1 pc. EURO-screw CS 6,3x13 mm and 1 pc. EURO-screw CS 6,3x35 mm (Depending on the requirement, different lengths can be used)



1 pc. CS-screw 4,0x16 mm and 1 pc. CS-screw 4,0x40 mm (Depending on the requirement, different lengths can be used)

Application details

The new screw connector CONTRA 800 is simply screwed on and can be used indoors and outdoors. Material thickness as little as 8 mm can be used when CONTRA 800 is combined with Euro screws. An ideal connector with rebate cuts. CONTRA can be used with Euro screws as little as 6 mm long.

Mounting: Screw with CS or EURO Screw.

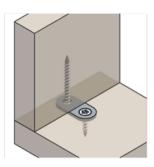
Benefits: Fast and universal. **Processing:** Only one saw cut or rout. Material selection: All wood and plastic materials.

Furniture components / corner joints

Recessed on end grain in 90°

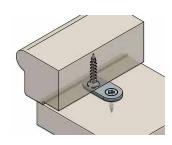


Recessed on face grain in 90°





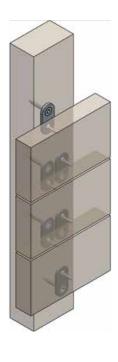
Plinth block

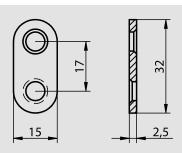






Facades, siding, and decking





Dimensions and material:

Length: 32 mm Width: 15 mm Thickness: 2,5 mm

Material: Steel, blue galvanized surface



2 Flute Straight Router Bit

Art. No. Z066

DUO-System



Note: Connectors consist of two identical brackets and are manufactured from high strength galvanized steel in Austria.

Application: Furniture frames, stairs, exhibition booths, and architectural millwork.

Benefits: Concealed, self-tightening, adjustable and demountable.

Make mortise with plunge router or CNC.

Installation: Install with CS-screws $\emptyset = 5$ mm or $\emptyset = 6$ mm and PH-holding screws $\emptyset = 5$ mm or $\emptyset = 6$ mm.

(screw length depending on application).

Suitable All solid wood and plywood materials from \geq 21 mm. materials:

Accessories

Routing-jigs MULTI F (plywood)

Routing-jig MULTI F 15, | Art.-No. K500 (for DUO 46/15, DUO 62/15, DUO 100/15)

Routing-jig MULTI F20, | Art.-No. K506 (for DUO 90/20)

Routing-jig MULTI F30, | Art.-No. K501 (for DUO 46/30, DUO 62/30)

Routing-jig MULTI F46, | Art.-No. K503 (for DUO 90/46)

Advice: All routing-jigs are suitable for a $\emptyset = 30$ mm guide bushing (for plunge router) and a $\emptyset = 15$ mm 2 Flute Straight Router Bit.

2 Flute Straight Router Bit

 \emptyset = 15 mm, length = 25 mm with \emptyset = 8 mm shank | Art.-No. Z066/08

Mounting screws (pan head screws, full threaded)

PH-screws 5x40 (200 pcs./package) | Art.-No. Z702 (for DUO und MODULAR Anti-Rotation)

PH-screws 5x60 (200 pcs./package) | Art.-No. Z704 (for DUO und MODULAR Anti-Rotation)

PH-screws 6x40 (250 pcs./package) | Art.-No. Z800 (for DUO)

PH-screws 6x60 (200 pcs./package) | Art.-No. Z802 (for DUO)

Mounting screws (countersunk screws, full threaded)

CS-screws 5x40 (500 pcs./package) | Art.-No. Z500 (for DUO und ACRO)

CS-screws 5x60 (250 pcs./package) | Art.-No. Z498 (for DUO, ACRO und BASIS)

CS-screws 6x40 (250 pcs./package) | Art.-No. Z501 (for DUO und ACRO)

CS-screws 6x60 (200 pcs./package) | Art.-No. Z499 (for DUO, ACRO und BASIS)







2) Mount with CS and PH-screws



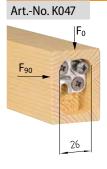
3) Assemble

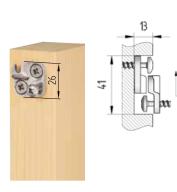




DUO 26

DUO 26/26 mm





5x40	5x60
1	1
2	2
	1

zul F ₀ zul F ₉₀	60	Load capacity		
	.00	zul F ₀	zul F ₉₀	
1 Slide-in direction Right angle to slide-in direction	1	Slide-in direction	Right angle to slide-in direction	
2 0,97 kN 1,07 kN	2	0,97 kN	1,07 kN	

Recommended timber dimension	Size of rebate		
Width/Height: 50x50 mm	Width	Height	Depth
	26 mm	41 mm	13 mm

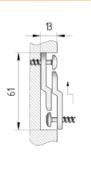
DUO Series 15

DUO 46/15 mm

Art.-No. K041







Mounting	5x40	5x60	Load c	apacity
screws	3X 4 U	SXOU	zul F _o	zul F ₉₀
PH	1	1	Slide-in direction	Right angle to slide-in direction
CS	1	1	0,86 kN	0,62 kN

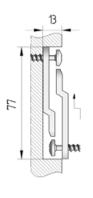
Recommended timber dimension	Size of rebate		
Width/Height: 30/80 mm	Width	Height	Depth
	15 mm	61 mm	13 mm

DUO 62/15 mm

Art.-No. K036







Mounting screws	5x40	5x60	Load capacity $\operatorname{zul} F_0 \qquad \operatorname{zul} F_{90}$	
PH	1	1	Slide-in direction	Right angle to slide-in direction
CS	2	2	1,29 kN	0,71 kN

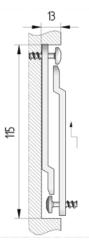
Recommended timber dimension	Size of rebate		
Width/Height: 30/100 mm	Width	Height	Depth
	15 mm	77 mm	13 mm

DUO 100/15 mm

Art.-No. K055







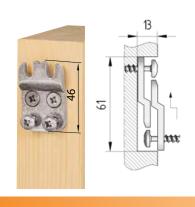
Mounting screws	5x40	5x60	Load capacity zul F ₀ zul F ₉₀	
PH	1	1	Slide-in direction	Right angle to slide-in direction
CS	3	3	2,00 kN	0,92 kN

Recommended timber dimension	Size of rebate		
Wilds /II-inh 20/140	Width	Height	Depth
Width/Height: 30/140 mm	15 mm	115 mm	13 mm

DUO Series 30

DUO 46/30 mm



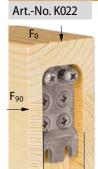


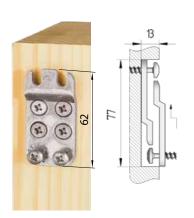
Mounting screws	5x40	5x60
PH	2	2
CS	2	2

Load capacity					
zul F ₀	zul F ₉₀				
Slide-in direction	Right angle to slide-in direction				
1,30 kN	1,12 kN				

Recommended timber dimension	Size of rebate		
Width/Height: 50/80 mm	Width	Height	Depth
	30 mm	61 mm	13 mm

DUO 62/30 mm





Mounting	5x40	5x60	Load c	apacity
screws) 3X 4 U	SXOU	zul F ₀	zul F ₉₀
PH	2	2	Slide-in direction	Right angle to slide-in direction
CS	4	4	2,15 kN	1,67 kN

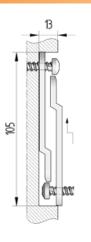
Recommended timber dimension	Size of rebate		
Wildel / United to 70 / 100	Width	Height	Depth
Width/Height: 50/100 mm	30 mm	77 mm	13 mm

DUO 20 and 46

DUO 90/20 mm







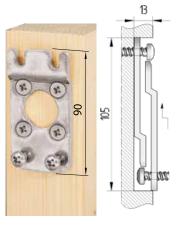
Mounting screws	6x40	6x60
PH	1	1
CS	2	2

Load capacity			
zul F ₀	zul F ₉₀		
Slide-in direction	Right angle to slide-in direction		
2,37 kN	1,03 kN		

Recommended timber dimension	Size of rebate		
Width/Height: 40/120 mm	Width	Height	Depth
	20 mm	105 mm	13 mm

DUO 90/46 mm





Mounting	6x40	6x60	Load c	apacity
screws	0.40	0,000	zul F ₀	zul F ₉₀
PH	2	2	Slide-in direction	Right angle to slide-in direction
CS	4	4	4,35 kN	2,28 kN

Recommended timber dimension	Size of rebate		
W/: data // Latinuta CO /120	Width	Height	Depth
Width/Height: 60/120 mm	46 mm	105 mm	13 mm

Acro-System

Post and beam connectors.

Application: Post and beam joints for light timber construction.

Benefits: Concealed, self-tightening, connector for for post and beam connections.

Mill pocket with plunge router and MULTI F routing jig.

Installation: Install connectior with CS-screws $\emptyset = 5 \text{ mm}$ or = 6 mm and

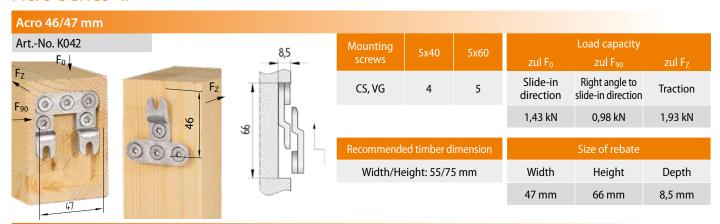
PH retaining screws $\emptyset = 5$ mm or $\emptyset = 6$ mm (screw length depending on application)

Suitable materials: Solid wood material.

Routing Jig MULTI F, Marking template, 2 Flute Straight Router Bit (Art.No. Z066). Accessories:

Various CS-screw lengths available on demand.

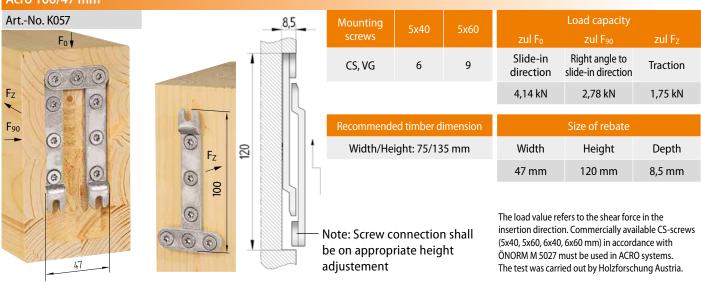
Acro Series 47







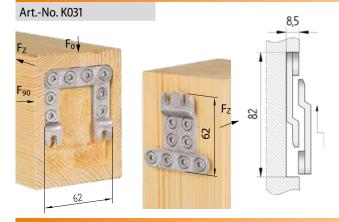
Acro 100/47 mm



Acro Series 62



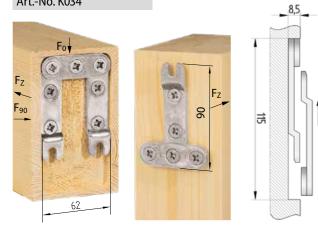




5v40 5v60		Load capacity		
3840	3,00	zul F ₀	zul F ₉₀	zul F _Z
8	8	Slide-in direction	Right angle to slide-in direction	Traction
		2,53 kN	1,80 kN	2,33 kN
ed timber di	mension		Size of rebate	
ight: 80/10	0 mm	Width	Height	Depth
		62 mm	82 mm	8,5 mm
	ed timber di		8 8 Slide-in direction 2,53 kN ed timber dimension ght: 80/100 mm Width	8 8 Slide-in direction 2,53 kN 1,80 kN 2d timber dimension Size of rebate ght: 80/100 mm Six of the state o

Acro 90/62 mm



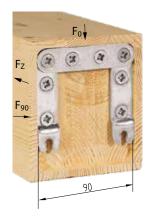


screws	0.40	UNUU	zul F ₀	zul F ₉₀	zul F _Z
CS, VG	5	7	Slide-in direction	Right angle to slide-in direction	Traction
			4,49 kN	1,81 kN	2,60 kN
Recommended timber dimension					
Recommende	ed timber di	imension		Size of rebate	
	ed timber d eight:80/13		Width	Size of rebate Height	Depth
			Width 62 mm		Depth 8,5 mm

Acro Series 90

Acro 90/90 mm

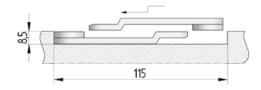
Art.-No. K032





Mounting screws	6x40	6x60	zul F₀	Load capacity zul F ₉₀	zul F _Z
CS, VG	8	8	Slide-in direction	Right angle to slide-in direction	Traction
			5,40 kN	2,80 kN	2,39 kN
Recommende	ed timber di	imension		Size of rehate	

Recommended timber dimension	Size of rebate		
Width/Height: 115/135 mm	Width Height Depth		
	90 mm	115 mm	8,5 mm



BASIS-System

Column mounting connectors

Benefits: Connector for direct mounting on solid surfaces, non-positive connection.

The BASIS column connectors consist of the BASIS 90/90, 62/62 and a galvanized

Installation: steel base plate that is bolted to the ground. The counterpart is installed

to the bottom of the post and sits inside a pocket that milled using a plunge router or CNC.

Suitable materials: Timber post to firm ground i.e. concrete slab, tiles, stone, wood etc.

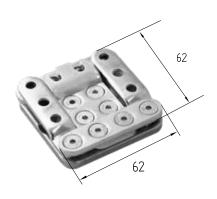
Application: Connector to mount columns and posts.

Accessories: For 62/62: Routing Jig MULTI F62 | Art.-No. K504, TCT Slotter | Art.-No. Z066, CS-screw 5x60 mm | Art.-No. Z498

For 90/90: Routing Jig MULTI F90 | Art.-No. K505, TCT Slotter | Art.-No. Z066, CS-screw 6x60 mm | Art.-No. Z499

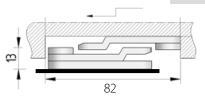
Basis 62/62 mm

Art.-No. K039



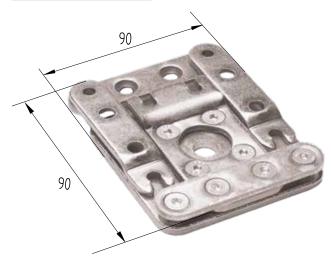
Mounting	5x60	M8		Load capacity	
screws	3X00	IVIO	zul F ₀	zul F ₉₀	zul F _Z
CS, VG	8	2	Slide-in direction	Right angle to slide-in direction	Traction
			2,90 kN	2,47 kN	3,67 kN

Recommended timber dimension	Size of rebate			
Width/Height: 78/95 mm	Width Height Depth			
	62 mm	82 mm	13 mm	



Basis 90/90 mm

Art.-No. K038

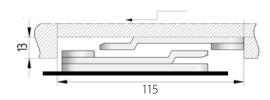


Mounting screws	5x60	M12
CS, VG	8	1

zul F₀	Load capacity zul F ₉₀	zul F ₇
Zui i 0	Zui i 90	Zurrz
Slide-in direction	Right angle to slide-in direction	Traction
3,99 kN	2,07 kN	4,72 kN

Recommended timber dimension
Width/Height: 115/135 mm

	Size of rebate	
Width	Height	Depth
90 mm	115 mm	13 mm



ACRO and BASIS installation



1) Route mortise with plunge router and routing jig.



2) Install ACRO connector brackets with screws



3) Assemble

The load value refers to the shear force in the insertion direction. Commercially available, CS screws (5x60 or 6x60 mm) in accordance with ÖNORM M 5027 and M8 CS screws or M12 screws must be used with the BASIS system. The test was carried out by Holzforschung Austria.

RICON® Stainless Steel

Universal connector made of A2 stainless steel up to 17,4 kN



Indoor and outdoor: furniture, balcony, deck, carport, playground and sports equipment, pergola, and light timber construction. Application:

Can be concealed or visible and used indoors and outdoors. Used with narrow timber widths starting **Benefits:**

from 20 mm upwards. High strength capacity up to 17,4 kN. Made of A2 stainless steel for usage classification 3.

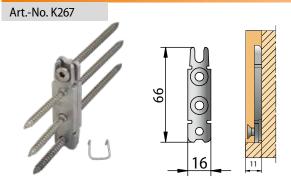
Make route using plunge router and routing jig or with CNC. Install plates with $\emptyset = 5$ mm and $\emptyset = 8$ mm CS-screws. Installation:

Can be used for single joint and double joint connection.

Suitable materials: All wood species including, such as oak, douglas fir, larch and impregnated woods, such as Accoya.

2 Flute Straight Router Bit | Art.-No. Z066, Routing template Multi F30 | Art.No. K501, K506..., Mounting set RICON® | Art.-No. K065. Accessories:

RICON® 66/16 EA Stainless Steel (F_{2.Rk} 4,8 kN*



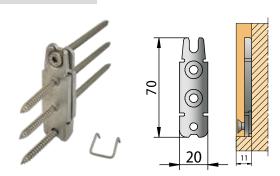
Connector	Tuno	Mounting screws		Charact. values [GL24h] NKL1*		
Connector	Type	Joist	Header	F _{1,RK} [kN]	F _{2,Rk} [kN]	
66/16	EA	3 x CS 5x80	3 x CS 5x50	3,5	4,8	
1 loc	king clip: F _{3,Rk}	= 1,0 kN	2 lock	ing clips: F _{3,Rk} =	2,0 kN	

Minimum timber dimensions: 30 x 86 mm

*Interior Glulam

RICON® 70/20 EA Stainless Steel (F_{2.Rk} 4,8 kN*)

Art.-No. K271



Connector	Туре	Mountin	g screws	Charact. values [GL24h] NKL1*		
Connector		Joist	Header	F _{1,RK} [kN]	F _{2,Rk} [kN]	
70/20	70/20 EA 3 x CS 5>		3 x CS 5x50	3,5	4,8	
1 locking clip: F = 1.0 kN			2 lock	ring clips: F =	2 0 kN	

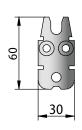
Minimum timber dimensions: 30 x 90 mm

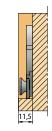
*Interior Glulam

RICON® 60/30 EA Stainless Steel (F_{2,Rk} 5,2 kN*)

Art.-No. K274







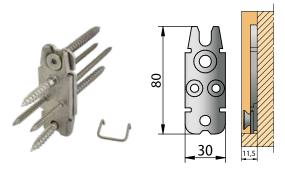
Connector	Туре	Mounting screws		Charact. values [GL24h] NKL1*		
		Joist	Header	F _{1,Rk} [kN]	F _{2Rk} [kN]	
60/30	EA	3 x CS 10x120	3 x CS 10x80	4,4	5,2	
1 locking clip: F _{3,Rk} = 1,9 kN			2 locking clips: F _{3,Rk} = 3,8 kN			

Minimum timber dimensions: 50 x 80 mm

*Interior Glulam

RICON® 80/30 EA Stainless Steel (F_{2,Rk} 7,5 kN*)

Art.-No. K275



Connector	Туре	Mountin	g screws	Charact. values [GL24h] NKL1*		
		Joist	Header	F _{1,RK} [kN]	F _{2,Rk} [kN]	
80/30	EA	2 x CS 8x80 2 x CS 5x80	2 x CS 8x50 2 x CS 5x50	4,4	7,5	
1 locking clip: F _{3.Rk} = 1,9 kN			2 locking clips: F _{3,Rk} = 3,8 kN			

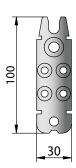
Minimum timber dimensions: 50 x 100 mm

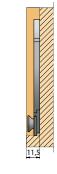
*Interior Glulam

RICON® 100/30 EA Stainless Steel (F_{2,Rk} 10,4 kN*)

Art.-No. K276







Connector	Туре	Mountin	g screws	Charact. values [GL24h] NKL1*		
Connector		Joist	Header	F _{2,KKC,RK} [kN]	F _{45,Rk} [kN]	
100/30	EA	2 x CS 8x80 2 x CS 5x80	2 x CS 8x50 4 x CS 5x50	4,4	10,4	
1 loc	king clip: F _{3,Rk}	= 1,9 kN	2 lock	ing clips: F _{3,Rk} =	3,8 kN	

Minimum timber dimensions: 50 x 120 mm

*Interior Glulam

Other sizes can be found in the online store:

160/40, 160/30, 140/30, 120/30, 80/40



^{*} Characteristic value F_{2,Rk} in the direction of insertion only applies when using the original KNAPP*CS-Screw according to ETA 10/0189 (29.03.2019).

Installation



1) Mill with routing jig.



2) Install with screws



3) Install the locking clip



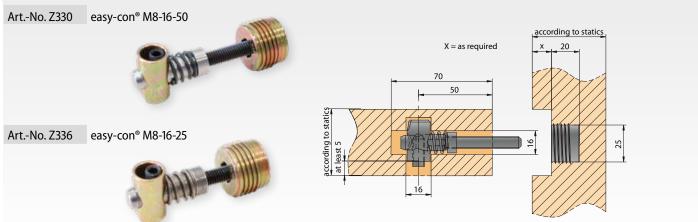
4) Slide together



5) Secured connection with locking clip.

easy-con®





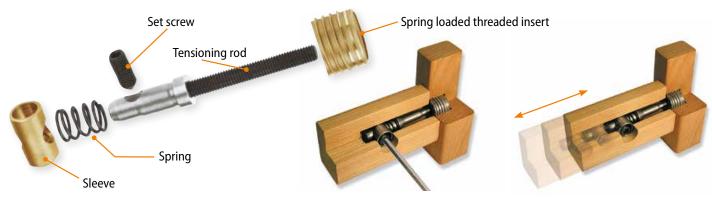
Application: Table leg to table tops and stair tread to stringer connections.

Installation: Pre-drill holes and insert connector pieces. Attach both components and tighten set screw.

Benefits: Non-visible, demountable, self-tightening, strong.

Suitable materials: All wood materials (solid and composite).

Traction strength: 3 kN



Example of table leg to table top connection

Stair installation: Tread can be mounted both on top or on the side of the stringer.



1) Screw-in threaded insert (SW 10)



2) Insert clamping elements in holes



3) Tighten elements (SW 4)

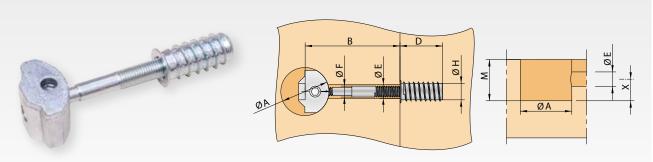


Stair steps attached and secured, connected with easy-con®

ZIPBOLT™ 90 KD







Load capacity up to 60 kg tension load (failure load approx. 100 kg)

Drilling depth M	Х	Ø A	В	D	ØН	ØF	Ε
20 mm	9,5 mm	35 mm	60-65 mm	32 mm	12 mm	8 mm	9 mm

Application: Frame connector for beds and RTA furniture.

Fast and easily installed by using a 5 mm hex bit SW5 in conjunction **Benefits:**

with cordless drill.

Pre-drill holes using plunge router or CNC. Installation:

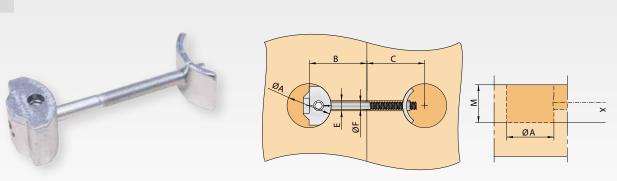
Insert connector parts into holes and assemble.

Suitable For all solid wood and wood based panels. materials:

ZIPBOLT™ 85

Joint connector for countertops ≥ 22 mm





Load capacity up to 60 kg tension load (failure load approx. 100 kg)

Drilling depth M	Length	Х	Ø A	В	C	ØF	E
20 mm	85 mm	9,5 mm	35 mm	33-44 mm	33-44 mm	6 mm	8 mm

Application: Joint connector for worktops, countertops and panels.

Fast and easily installed by using a 5 mm hex bit SW5 in conjunction **Benefits:**

with cordless drill.

Pre-drill holes using plunge router or CNC. Installation:

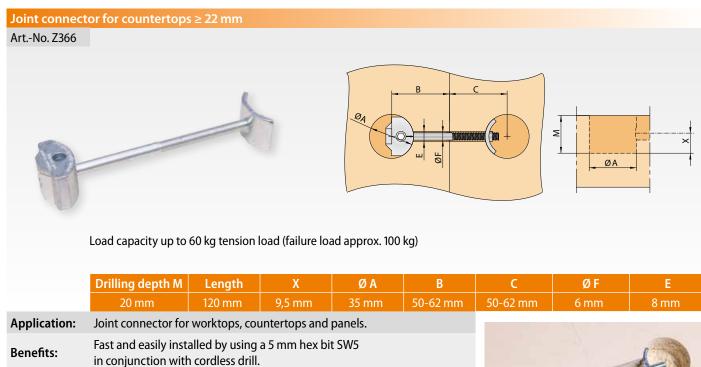
Insert connector parts into holes and assemble.

Suitable

For all solid wood and wood based panels. materials:



ZIPBOLT™ 120



Suitable

Installation:

materials:

For all solid wood and wood based panels.

Pre-drill holes using plunge router or CNC.

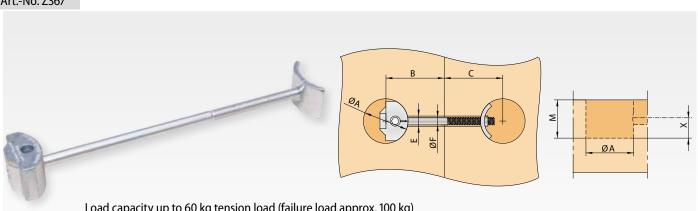
Insert connector parts into holes and assemble.



ZIPBOLT™ 170

Joint connector for countertops ≥ 22 mm

Art.-No. Z367



Load Capacity	up to oo kg t	CH3IOH IOGG	ianuic ioau c	ippion, ioo k	.9)

Drilling dept	h M Length	Х	ØΑ	В	C	ØF	E
20 mm	170 mm	9,5 mm	35 mm	74-87 mm	74-87 mm	6 mm	8 mm

Application: Joint connector for worktops, countertops and panels.

Fast and easily installed by using a 5 mm hex bit SW5 **Benefits:**

in conjunction with cordless drill.

Pre-drill holes using plunge router or CNC. Installation:

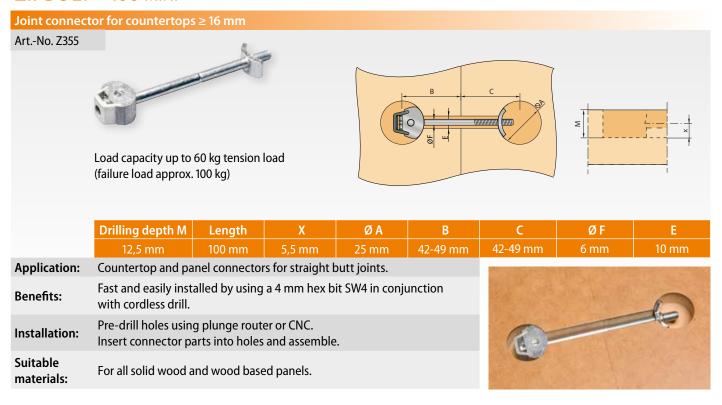
Insert connector parts into holes and assemble.

Suitable

For all solid wood and wood based panels. materials:



ZIPBOLT™ 100 MINI



TREPPO



Application: Stair tread assembly for new construction and renovations.

Benefits: Height-adjustable mounting screw for steps to compensate for height differences in switched concrete stages.

Installation: Concrete $\emptyset = 14$ mm and If wood $\emptyset = 6$ mm drilling. Bonding with KNAPP®-ADHESIVE PM + in the borehole.

Suitable Wood stair treads attached to concrete, stone, and metal. materials:

Accessories: KNAPP®-ADHESIVE PM+ | Art.-No. Z010 see page 31



1) Pre-drill holes







Transfer bore holes

4) Glue and assemble

TRIED-AND-TESTED

I fast curring

I solvent-free

KNAPP®-ADHESIVE



KNAPP®-ADHESIVE PM+

- I gap-filling for wide joints
- I low rise foaming
- I water resistance according to D4 DIN EN 204
- I free from curring agents

KNAPP®-ADHESIVE PU+

- I gap-filling for thin joints
- I for fine surfaces
- I water resistance according to D4 DIN EN 204
- I free from curring agents

	KNAPP®-ADHESIVE PM +	Knapp®-adhesive pu +
Article-No.	ArtNo. Z010	ArtNo. Z011
Application	Suitable for on-site work and rough surfaces.	Wide range from furniture to window manufacturing, suitable for fine surfaces.
Benefits	An easy to handle one-component polyurethane adhesive, gap-filling, water resistant, formaldehyde-free according to DIN EN204 - D4.	An easy to handle one-component polyurethane adhesive free from curing agents and formaldehyde-free, water resistant according to DIN EN2017 - D4.
Application instructions	Apply on one side, it will foam during the curing process. Skinning time is about 7 minutes, functional strength after 20 min, curing time at approx. 24 hours, working temperature minimum +7°, moisture content of wood 8 - 18 %, adhesive testing is recommended.	Apply on one side, it will foam during the curing process. Skinning time is about 10 minutes, functional strength after 20 min, curing time at approx. 24 hours, working temperature minimum +7°, moisture content of wood 8 - 18 %, adhesive testing is recommended.
Suitable materials	Wood and building materials, many plastics, stone, ceramic, metal and KNAPP®-Connectors, especially the TREPPO (2 or 3 cartridges are needed for 100 drillings).	Large range of wood materials, all types of plastic, stone, metal and all recommended KNAPP®-Connectors.
Mounting	General application instructions with the technical and safety data sheets is available to download.	

KNAPP®-ADHESIVE PM+ is recommended for fixing wooden stair-treads:

TREPPO



KNAPP®-ADHESIVE PU+ is recommended for:

CHAMP

















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All brochures, data sheets, technical details are available for download on our website.

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Concealed I Self-tightening I Demountable



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